

**NURSING INTERVENTIONS TO MOTHERS WITH  
PREGNANCY INDUCED HYPERTENSION AT  
SRI RAMAKRISHNA HOSPITAL, COIMBATORE.**

**REG. NO. 30091424**

A Dissertation submitted to  
**The Tamilnadu Dr. M. G. R. Medical University,**  
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In partial fulfillment of the requirement for the  
Award of the Degree of

**MASTER OF SCIENCE IN NURSING**

**2010**

# **NURSING INTERVENTIONS TO MOTHERS WITH PREGNANCY INDUCED HYPERTENSION AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE.**

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NURSING INTERVENTIONS TO MOTHER

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### **Abstract**

A nursing care study was conducted for mothers with pregnancy induced hypertension in antenatal ward of Sri Ramakrishna Hospital, Coimbatore, to assess the needs of the mother with pregnancy induced hypertension, to provide nursing care, to evaluate the condition of mother after nursing interventions and prepare a nursing care module for mother with pregnancy induced hypertension. A descriptive case study design was adapted to conduct the study. Convenient sample of 5 mothers were selected for the study. The data was collected by using nursing assessment tool prepared by the researcher. Nursing care was rendered based on the needs and problems of mothers. Descriptive statistics was used to analyze the data. The study reveals that continuous nursing care with 1:1 ratio helps to promote the maternal and fetal wellbeing and reduced the complications.

## **Nursing Interventions to Mothers with Pregnancy Induced Hypertension at Sri Ramakrishna Hospital, Coimbatore.**

Pregnancy is one of the most exciting and important event in each woman's life. The care of pregnant mother is a major focus of midwifery practice. Most of the women have uncomplicated pregnancies and normal deliveries. Unfortunately, woman may experience some complications during pregnancy. It may occur at any time and make pregnancy high risk. The main complications are pregnancy induced hypertension, gestational diabetes mellites, anaemia, antepartum haemorrhage, hyperemesis gravidarum and preterm labour etc (Watkins, 2005).

Pregnancy induced hypertension is one of the common complications met with pregnancy and contributes significantly to maternal/perinatal mortality and morbidity, reason being vasospasm, a condition that occurs in both small and large arteries (Lhynelli, 2010).

Critical care nurses are called upon to assist with care of critically ill obstetrics patients. Some of the most complex care is required for mothers with pregnancy induced hypertension (Bridges, Womble, Wallace & Mc Cartney, 2003).

Pregnancy induced hypertension affects 7-10% of all pregnancies. Preeclampsia occurs in 2-8% of all pregnancies. Eclampsia occurs in about 1/2000 deliveries even in resource rich countries and vary from 1/100 to 1/700 in resource poor countries (Duley, 2008).

The incidence of pregnancy induced hypertension in India is 15.2% and incidence of preeclampsia is reported to be 8 - 10% of the pregnancies (Krishna Mohan & Venkataraman, 2007).

Pregnancy induced hypertension is defined as the hypertension that develops as a direct result of the gravid state. It includes (i) gestational hypertension (ii) Preeclampsia and (iii) Eclampsia.

Gestational hypertension develops when the blood pressure elevates without proteinuria or edema (Pilliteri, 2007).

Preeclampsia occurs when blood pressure rises to 140/90 mm of Hg or more, with edema and proteinuria which occurs initially after 20 weeks of gestation (Sherwen, Scoloveno & Toussie, 2001).

Eclampsia is a critical condition in that, preeclamptic signs are accompanied by seizures, coma and or shock. A woman has passed into this third stage when the cerebral edema is so acute that a convulsion occurs (Pilliteri, 2007).

Pregnancy induced hypertension may rapidly progress and complicate the pregnancy if left untreated or not promptly managed. Early identification and initiation of treatment is important while caring a mother with pregnancy induced hyper tension.

According to Yerge and Gayle in 2001, a skilled midwife can identify early signs of pregnancy induced hypertension for medical interventions. Midwives should be knowledgeable while caring a mother with pregnancy induced hypertension to

provide optimal nursing care. Continuous and regular monitoring of mother helps to identify the warning signs of complications and a skilled nursing care can prevent a mother with pregnancy induced hypertension progressing into complications.

Nurses have a key role in early identification of pregnancy induced hypertension. Clinical research has repeatedly found that regardless of complications, early and consistent prenatal care results in improved health for both mother and foetus.

Nurses must be knowledgeable about the numerous changes that can occur in pregnancy and must recognize the significance of deviation from normal. To provide safe and effective care for high risk clients, a joint effort from all members of health care team is needed, where each member contributes unique skills and talents to provide optimum outcome for mother and foetus (Bobak & Irene, 1994).

### **1.1. NEED FOR THE STUDY**

Hypertension in pregnancy places the mother and foetus at increasing risk as pregnancy progresses. The early recognition of elevated blood pressure is still considered the most critical step in preventing maternal and fetal mortality and morbidity associated with pregnancy induced hypertension (Sherwen, Scoloveno & Toussie, 2001).

Each year newly diagnosed cases of pregnancy induced hypertension are increasing. Most of the cases complicate the pregnancy severely resulting in maternal and fetal mortality and morbidity.

The diagnosis of pregnancy induced hypertension produces considerable stress in the mother and family. According to Black (2007), stress is higher in women with severe pre eclampsia, and nurses can help their clients to reduce stress levels through identification of social supports within the family and in the community.

Nurse's play a major role in indentifying the women at risk of developing pregnancy induced hypertension. Each woman is assessed for symptoms of pregnancy induced hypertension on each visit.

The third trimester is the most peak time for providing optimal care for mothers with pregnancy induced hypertension. Once the mother is admitted to obstetric care the midwife's role is to provide appropriate management and continuity of care. The nurse assesses the client's condition continuously inorder to identify the deviation which affects maternal and fetal wellbeing. The midwife initiates early treatment based on the assessment data and thus prevents worsening of disease condition.

A compassionate, knowledgeable and skilled nursing care is an asset in achieving positive feto-maternal outcome for mothers with pregnancy induced hypertension.

## **1.2. STATEMENT OF THE PROBLEM**

NURSING INTERVENTIONS TO MOTHERS WITH PREGNANCY INDUCED HYPERTENSION AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE.



### **1.3. OBJECTIVES**

- 1.3.1 To assess the needs of mother with pregnancy induced hypertension.
- 1.3.2. To provide nursing care to mother with pregnancy induced hypertension.
- 1.3.3. To evaluate the condition of mother with pregnancy induced hypertension after nursing interventions.
- 1.3.4 To prepare a nursing care module for mother with pregnancy induced hypertension.

### **1.4. OPERATIONAL DEFINITIONS**

#### **1.4.1. Nursing Interventions**

It is the nursing care rendered for mothers with pregnancy induced hypertension.

#### **1.4.2. Pregnancy induced hypertension**

It is a state of elevated blood pressure to the extent of 140/90mm of Hg or more associated with or without proteinuria and edema developed in third trimester of pregnancy.

#### **1.4.3. Mother**

Refers to antenatal mothers diagnosed with pregnancy induced hypertension in third trimester of pregnancy admitted in the hospital.

### **1.5. CONCEPTUAL FRAME WORK**

Orlando's nursing process model was chosen as the conceptual framework for the study. It consists of five phases such as assessment, diagnosis, planning, implementation and evaluation.

**1.5.1. Assessment**

It is a systematic collection of data to determine a person's health status and to identify actual or potential problem. There are two types of data collected here namely subjective and objective. The gathering of assessment data is done by means of history collection and physical examination.

**1.5.2. Nursing Diagnosis**

Diagnosis is made subsequently after assessment. The diagnosis may represent an actual or a potential problem of the patient. The diagnosis is done by proper analysis and synthesis of the data collected from health history and health assessment.

**1.5.3. Planning**

Plan of care is designed based on identified needs and problems. This helps to resolve the diagnosed problem in an orderly way. Planning serves as a basis for implementation and prevents missing of any intervention that has to be done.

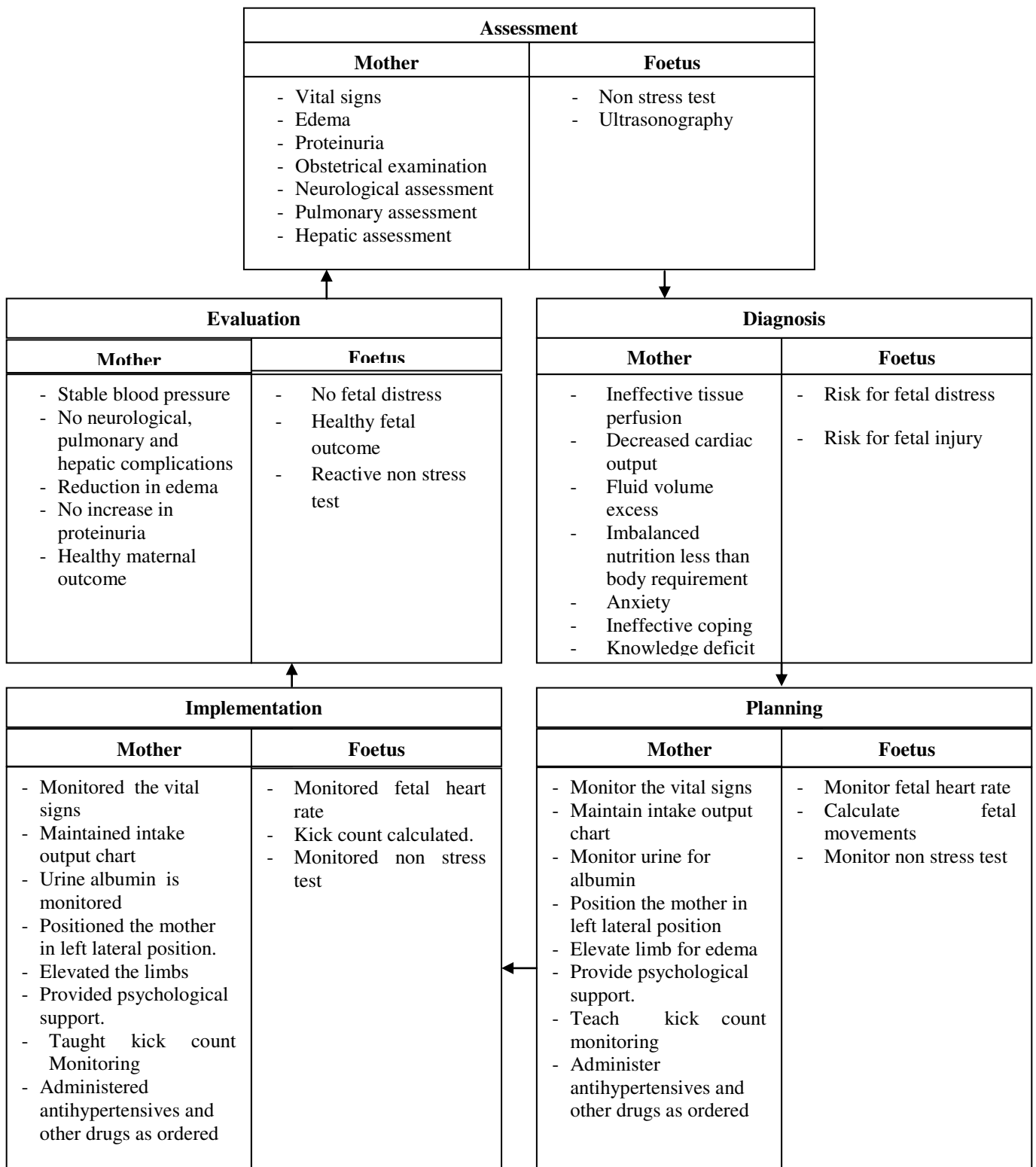
**1.5.4. Implementation**

The plan of care is actualized through nursing interventions. The proposed care plan is implemented by the nurse and can be altered during implementation process depending upon the patients' changing needs and priorities.

**1.5.5. Evaluation**

This determines the mothers' responses to the nursing intervention and the extent to which the goals have been achieved.

**FIG. 1.1.**  
**CONCEPTUAL FRAMEWORK ON NURSING PROCESS MODEL**



### **1.6. PROJECTED OUTCOME**

Nursing interventions for mothers with pregnancy induced hypertension will improve the maternal and fetal well being and will reduce the complications.

## **REVIEW OF LITERATURE**

In the present chapter the researcher reviewed the related literatures in order to understand about nursing care for mothers with pregnancy induced hypertension. It was grouped under the following headings

2.1. Literature related to pregnancy induced hypertension

2.2. Literature related to nursing care for mothers with pregnancy induced hypertension.

### **2.1. LITERATURE RELATED TO PREGNANCY INDUCED HYPERTENSION**

Pregnancy induced hypertension refers to conditions characterized by an abnormal rise in blood pressure during pregnancy (Goodson, 2002).

Preeclampsia is a multisystem disorder of unknown etiology characterized by development of hypertension to the extent of 140/90 mm of Hg or more with proteinuria after the 20<sup>th</sup> week of pregnancy in a previously normotensive and non proteinuria mother (Dutta , 2004).

Pregnancy induced hypertension includes (i) Gestational hypertension (ii)Preeclampsia and (iii) Eclampsia.

A woman is said to have gestational hypertension when she develops elevated blood pressure and has no proteinuria. Perinatal mortality is not increased with simple gestational hypertension. Chronic hypertension may develop in these women later in their life (Pilliteri, 2007).

Preeclampsia is a pregnancy specific condition in which hypertension develops after 20 weeks of gestation in a previously normotensive woman. It is a multisystem, vasospastic disease process characterized by hemo concentration, hypertension and proteinuria. The diagnosis of preeclampsia has traditionally been based on the presence of hypertension with proteinuria and/or edema (Bobak & Irene, 1994).

Eclampsia is the most severe form of hypertension in pregnancy. A woman has passed into this third stage when the cerebral edema is so acute that a convulsion occurs. With eclampsia, maternal mortality is as high as 15% (Pilliteri, 2007).

An article entitled Pregnancy induced hypertension: Preeclampsia or toxemia from [http://www.american pregnancy association.com](http://www.americanpregnancyassociation.com) states the risk factors of pregnancy induced hypertension are (i) primigravida, (ii) family history of hypertension, preeclampsia, eclampsia (iii) placental abnormalities (iv) preexisting vascular or renal disease (v) Diabetes (vi) Age extremes (vii) previous pregnancy induced hypertension (ix) poor pregnancy outcome and (x) malnutrition.

Mild preeclampsia generally produces the following signs; hypertension, proteinuria, generalized edema and a sudden weight gain of more than 1.4 kg a week during the second trimester or more than 0.5kg a week during the third trimester.

Severe preeclampsia is marked by increased hypertension and proteinuria, which eventually lead to the development of oliguria. Hemolysis, elevated liver enzyme levels and a low platelet count (the HELLP syndrome) is commonly severe.

In eclampsia all the clinical manifestations of preeclampsia are magnified and associated with seizures and possibly coma, premature labour, still birth, renal failure and liver damage (Spring House, 2008).

A study conducted in Jawaharlal Institute of Post-Graduate Medical Education and Research find out that there was higher number of preterm, intrauterine growth retardation and small for gestational age babies among the infants of pregnancy induced hypertension mothers (Sivakumar, Badhe & Bhat, 2009).

A case control study conducted on neonatal morbidity pattern in infants of hypertensive mothers revealed that pregnancy complicated with hypertension are associated with an increase in neonatal morbidity. It also revealed that caesarean delivery rate was also significantly higher in hypertensive mothers (Onyiriuka, 2007).

A cohort case control study conducted to determine the effect of mild vs severe maternal hypertension on the neonatal morbidity of very low birth weight infants reveals that infants born to mothers with mild hypertension had less respiratory distress syndrome, apnea, ventilator therapy, oxygen requirements and bronchopulmonary dysplasia when compared to very low birth weight infants born to mothers with severe hypertension (Kim & Vohr, 1996).

Zeeman, in 2006 conducted a review on obstetrical critical care; a blue print for improved outcomes. He states that one of the most common reasons for intensive care unit admission are hypertensive disorders of pregnancy. Emphasis on early detection of maternal problem and promote referral to tertiary centres with intensive

care unit facilities to provide optimum care could minimize the prevalence of multi organ failure and mortality in critically ill obstetric mothers.

The complications of pregnancy induced hypertension are eclampsia, accidental haemorrhage, oliguria/anuria, dimness of vision and even blindness, preterm labour, HELLP syndrome. Complications related to foetus are intrauterine death, intra uterine growth retardation, asphyxia and prematurity (Devraj, David, Anthony, Umamaheswari & Sreekala, 2007).

## **2.2. LITERATURE RELATED TO NURSING CARE FOR MOTHERS WITH PREGNANCY INDUCED HYPERTENSION**

Any woman who falls into one of the high risk categories for pregnancy induced hypertension should be observed carefully for symptoms at prenatal visits. The mother should be told about the symptoms to watch for so that she can call and alert medical personnel if additional symptoms occur between visits (Pilliteri, 2007).

Physical examination of mothers will disclose the three classic signs of pregnancy induced hypertension: elevated blood pressure, proteinuria and edema. When assessing a client with pre eclampsia weigh her daily, measure urine output every 8-12 hours and assess for proteinuria (Hacker & Moore, 1998).

A review of symptoms adds to the data base for detecting blood pressure changes from baseline, abnormal weight gain, increased signs of edema and presence of proteinuria. It is also important to note whether the woman is having unusual frequent or severe headaches, visual disturbances or epigastric pain (Bobak & Irene, 1994).



If the preeclamptic client is hospitalized, her sensorium, and vital signs including blood pressure, pulse, respiration and deep tendon reflexes are assessed and recorded every 4 hours or more frequently if she is unstable. Fetal heart rate is recorded at the time when maternal vital signs are assessed. Continuous fetal monitoring may be used to assess fetal status. The maternal lungs are assessed for rales indicating pulmonary edema. Nail beds are assessed for cyanosis (Sherwen, Scoloveno & Toussie, 2001).

Prior to term, fetal assessment for the preeclamptic client may include evaluation of fetal activity records, non stress tests, ultrasound with Doppler studies of the placenta and blood vessels and biophysical profile. Tests for fetal maturity, such as amniocentesis for lecithin spingomyelin ratio and phosphatidyle glycerol may be performed in order to plan delivery (Wijeyaratne, 1998).

If eclampsia occurs, the nurse notes the onset, course and duration of the convulsions. Vital signs are monitored every 5 minutes until stable and every 15 minutes afterwards. The client's lung fields are assessed for pulmonary edema. Fetal heart rate is determined and continuous fetal monitoring is initiated (Pilliteri, 2007).

Early detection and management of preeclampsia are associated with the greatest success in reducing risks and progress of this condition (Carol, 2001).

Delivery is the most effective treatment for pregnancy induced hypertension. Management goals focus on maintaining pregnancy until the foetus is matured. In case of severe preeclampsia, however an immature neonate who receives excellent neonatal intensive care may have a better chance of survival than if not delivered.

Modified bed rest in the left lateral position may be advised for client with preeclampsia. The left lateral position decreases pressure on the venacava and is believed to improve venous return, placental and renal perfusion. With increased renal perfusion, excess fluid is mobilized, urine output increases and blood pressure may stabilize or decrease (Baby, 2010).

If preeclampsia is severe, the decision may be to deliver the child as soon as the woman is stabilized. If clinically indicated, vaginal delivery may be attempted through induction with intravenous oxytocin. Caesarean delivery is performed if induction is unsuccessful. In general, vaginal delivery presents a lower risk than caesarean delivery (Sherwen, Scoloveno & Toussie, 2001).

According to Pilliteri, one of the nursing interventions for pregnancy induced hypertensive mothers are promotion of good nutrition. Because the woman is losing protein in the urine, she needs a high protein diet. At one time stringent restriction of salt was advised to reduce edema. This is no longer true as stringent sodium restriction may activate the angiotensin system and result in increased blood pressure, compounding the problem.

The diagnosis of pregnancy induced hypertension produces considerable stress in the mother and family. A study conducted by Black in 2007, in Temponnade University revealed that stress is higher in women with preeclampsia which worsens the condition to severe preeclampsia. The nurses can provide emotional support and reduce stress levels by identifying social supports within the family and in the community. Health care providers cannot solve all of people's problems but it can bring concern for the mothers.

Nurses must be responsible for providing a safe environment for the clients. The side rails on the woman's bed should be raised to keep her from falling if she have a convulsion. Noise and external stimuli must be minimized (Bobak & Irene, 1994).

A study conducted to determine the maternal outcome associated with severe chronic hypertension in pregnancy revealed that intensive monitoring of the clinical status of mother was associated with low maternal morbidity and the absence of maternal deaths (Gracia, Ruede & Smith, 2005).

A phenomenological study conducted to identify life experiences of women with pregnancy induced hypertension studied four essential themes like impact of bed rest, unaware of impact of pregnancy induced hypertension and its effect on self and unborn child, fear of outcome of pregnancy and psychological impact of symptom of pregnancy induced hypertension. This study is significant to nursing because exploring and analysing mothers' life experiences will lead nurses in planning holistic care and developing new intervention aimed at reducing apprehension, anxiety and knowledge deficit regarding high risk condition (Raddi, Nayak & Prakash, 2007).

A study conducted by James, Mgbekam & Edam, in 2009 to find out the knowledge, attitude and preventive practices towards pregnancy induced hypertension among pregnant women in Nigeria states that the nurse should ensure the pregnant women's blood pressure and excessive weight gain on a regular basis so as to control it before it gets bad. They again states that the health workers should embark on a more intensive education to pregnant women on the symptoms of pregnancy induced hypertension to access health care at the earliest.

A study was conducted to evaluate the intensive care management of severe pregnancy induced hypertension. The paper looks at strict hemodynamic monitoring and management by the nurses which is required to prevent complications such as eclampsia, DIC, HELLP syndrome, maternal and fetal death (Mourad, 2008).

A study conducted by Soya, Kumari, Geetha, Mumthas & Kadeeja in 2003 states that a structured teaching programme on selected self care activities by the nurses considerably enhanced the knowledge and helped the women with pregnancy induced hypertension to attain favourable maternal outcome. The authors conclude that the findings have implications on practice, education, administration and research of nursing to improve the self care practices of women with pregnancy induced hypertension in the effective control of pregnancy induced hypertension.

A study was conducted by Philipino nursing students in 2002 which revealed that prompt nursing care can reduce the maternal and fetal mortality and morbidity in mothers with pregnancy induced hypertension which is successful in terms of healthy maternal and fetal outcome.

Walker (1996) states that the maternal deaths due to pregnancy induced hypertension is often related to inadequate or incorrect care. Hence, a logical stepwise management structure need to be developed in each hospital to make sure all women at risk get the best care available.

A study was conducted by Devraj, David, Anthony, Umamaheshwary & Sreekala in 2007 to study the occurrence of maternal and fetal complication in pregnancy induced hypertension mothers. They revealed that maternal and fetal

complication can be reduced only by optimal antenatal care, early diagnosis and obstetric intervention.

Pregnancy induced hypertension is a life threatening condition which endangers survival of both mother and foetus. It should be diagnosed as early as possible through proper antenatal care to prevent its complications. A meticulous nursing care with close monitoring of mothers will promote maternal and fetal wellbeing. Nurses with their scientific knowledge on pregnancy induced hypertension will help to reduce its complications.

## **METHODOLOGY**

The present study was designed for nursing interventions to mothers with pregnancy induced hypertension. The methodology of the present study includes research design, setting, population, variables of the study, materials for data collection, validity of the tool, hypothesis, pilot study, main study, technique of data analysis and interpretation.

### **3.1. RESEARCH DESIGN**

Descriptive case study design was adopted for the study.

### **3.2. SETTING**

The setting selected for the study was Sri Ramakrishna hospital, Coimbatore, which is a 500 bedded multi speciality hospital. The Obstetrics and Gynaecology Ward has 50 beds. Approximately 60-70 mothers are been admitted to antenatal ward with pregnancy induced hypertension annually.

### **3.3. POPULATION**

The population for the present study was antenatal mothers with pregnancy induced hypertension admitted to obstetrics and gynaecology ward.

### **3.4. SAMPLING**

Convenient sampling technique was used to select mothers with pregnancy induced hypertension. Five mothers were selected for the study and their age ranges from 25-39 years.

### **3.5. VARIABLES OF THE STUDY**

#### **3.5.1. Dependent variable**

Pregnancy induced hypertension.

#### **3.5.2. Independent variable**

Nursing interventions.

### **3.6. MATERIALS**

Tool 1: Demographic data

Tool 2: Assessment of maternal and fetal wellbeing

Tool 3: Nursing care plan

#### **Tool 1: Demographic data**

Assessment tool consists of baseline demographic data, family history, past obstetrical history and present obstetrical history.

#### **Tool 2: Assessment of maternal and fetal wellbeing**

Assessment of maternal and fetal well being consists of two parts, initial assessment and ongoing assessment.

Initial assessment consists of head to foot physical examination including obstetrical assessment of mother. Fetal wellbeing is assessed by fetal heart rate, non stress test and ultrasonography report.

Ongoing assessment consists of daily assessment of vital signs, urine albumin, weight, edema, deep tendon reflexes, fluid intake and output chart, neurological assessment, pulmonary assessment and hepatic assessment.

Delivery of foetus is the management of choice for pregnancy induced hypertension, and most of the mothers will regain their normotensive state immediately after delivery. Hence, the researcher has decided to terminate the care after delivery of foetus. Thus the evaluation of mother with pregnancy induced hypertension after nursing interventions is done before the mother is shifted for delivery.

### **Tool 3: Nursing care plan**

Standard nursing care plan was prepared based on expected needs and problems of mothers with pregnancy induced hypertension.

### **3.7. VALIDITY OF THE TOOL**

The validity of the tool was obtained with guidance of the experts in the specialized area.

### **3.8. PILOT STUDY**

Prior to the main study a pilot study was conducted to find out the feasibility and practicability of the study. The study was conducted in Sri Ramakrishna Hospital, Obstetrics and Gynaecology Ward for 10 days. A convenient sample of 1 subject was selected for the pilot study. Initial assessment was done and care was given based on the problems identified. Maternal and fetal wellbeing was assessed daily. The result revealed that the maternal and fetal health was improved after nursing interventions.

### **3.9. MAIN STUDY**

The main study was conducted to meet the objectives formulated. Convenient samples of 5 subjects were selected. The baseline data was obtained from



the records of the subjects and physical assessment. Nursing interventions were planned based on the problems identified. Maternal and fetal wellbeing were assessed daily and care was rendered. The researcher felt the need for preparing a nursing care module during pilot study and a fourth objective was formulated to prepare a nursing care module for mothers with pregnancy induced hypertension. Hence a nursing care module was prepared as per the fourth objective.

### **3.10. TECHNIQUES OF DATA ANALYSIS AND INTERPRETATION**

Descriptive statistics was applied to analyse the data.

## **DATA ANALYSIS AND INTERPRETATION**

The study was conducted in Antenatal Ward of Sri Ramakrishna Hospital, Coimbatore. Five mothers were selected by convenient sampling technique. Initial assessment of mothers was done to ensure maternal and fetal wellbeing. Ongoing assessment was done daily. Nursing care was given to mother in 1:1 ratio. Evaluation of nursing care was done after the termination of nursing care.

### **SECTION – I**

#### **4.1. ANALYSIS OF THE DEMOGRAPHIC DATA**

The demographic data of mothers with pregnancy induced hypertension in terms of age, education, occupation and obstetrical score are presented in tables and graphs.

**TABLE 4.1.**  
**DISTRIBUTION OF MOTHERS BY DEMOGRAPHIC DATA**

(N=5)

Demographic Data	No. of Mothers	Percentage (%)
Age in years		
20 – 25	1	20
26 – 30	2	40
31 – 35	1	20
36 – 40	1	20
Education		
School	2	40
Diploma	1	20
Graduate	1	20
Post Graduate	1	20
Occupation		
House wife	4	80
Working	1	20
Obstetrical Score		
Primigravida	2	40
Multigravida	3	60

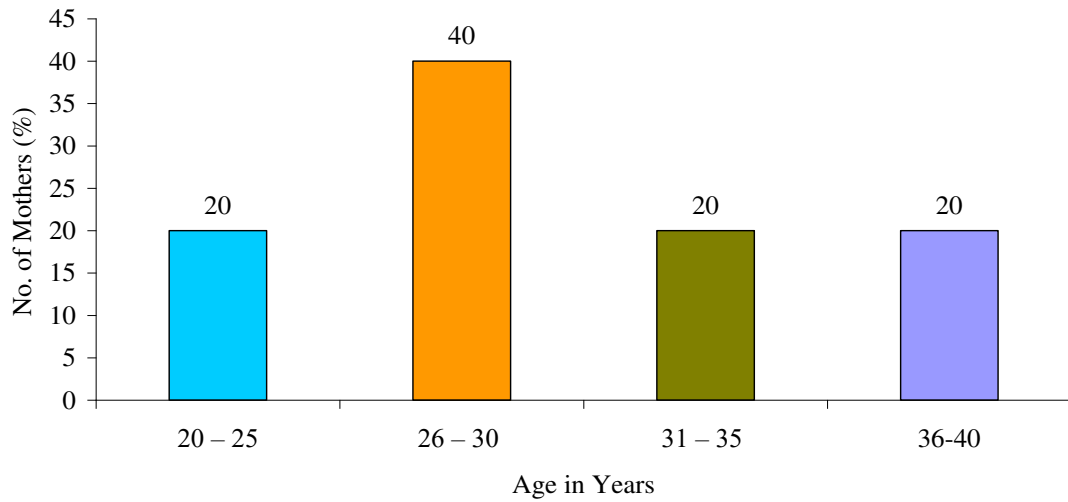
Age distribution table shows that 40% of mothers with pregnancy induced hypertension were in the age group of 26 – 30 years, 20% were between 20 -25 years, 31 – 35 years and 36 – 40 years respectively.

Distribution of mothers by education illustrates 40% had school education, 20% were diploma holders, graduates and postgraduates respectively.

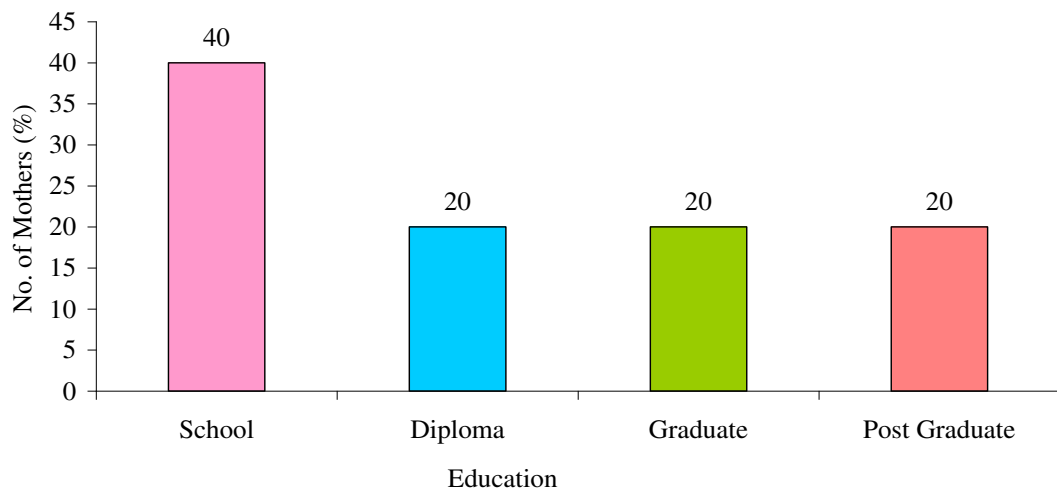
Distribution of mothers by occupation reveals that 80% of mothers were house wives and 20% were working women.

Distribution of mothers by obstetrical score shows 60% of mothers with pregnancy induced hypertension were multigravida and 40% were primi gravida.

**FIG. 4.1.**  
**DISTRIBUTION OF MOTHERS BY AGE**



**FIG. 4.2.**  
**DISTRIBUTION OF MOTHERS BY EDUCATION**



#### 4.2. ANALYSIS OF THE FAMILY HISTORY

The family history of mothers with pregnancy induced hypertension in terms of hypertension is presented in table and graph.

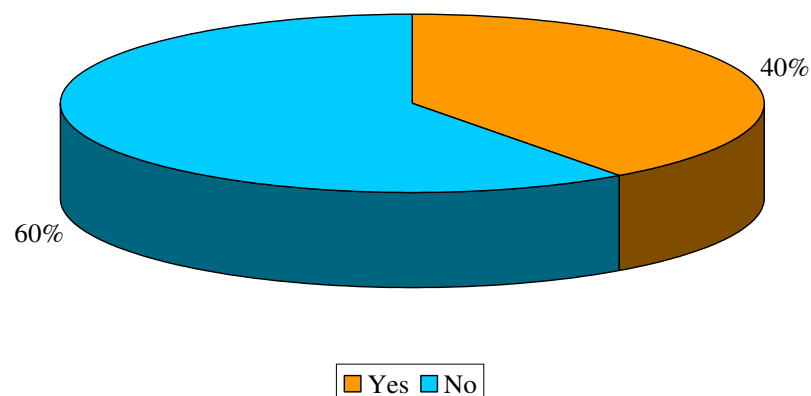
**TABLE 4.2.**  
**DISTRIBUTION OF MOTHERS BY FAMILY**  
**HISTORY OF HYPERTENSION**

(N=5)

Family history of hypertension	No. of Mothers	Percentage (%)
Yes	2	40
No	3	60

Distribution of mothers by family history shows that 40% of mothers had family history of hypertension and 60% of mothers did not have family history of hypertension.

**FIG. 4.3.**  
**DISTRIBUTION OF MOTHERS BY FAMILY HISTORY OF**  
**HYPERTENSION**



### 4.3. ANALYSIS OF OBSTETRICAL HISTORY

Analysis of obstetrical history includes past obstetrical history of pregnancy induced hypertension and period of pregnancy induced hypertension diagnosis in present pregnancy are presented in tables and graphs.

**TABLE 4.3.**  
**DISTRIBUTION OF MOTHERS BY OBSTETRICAL HISTORY**

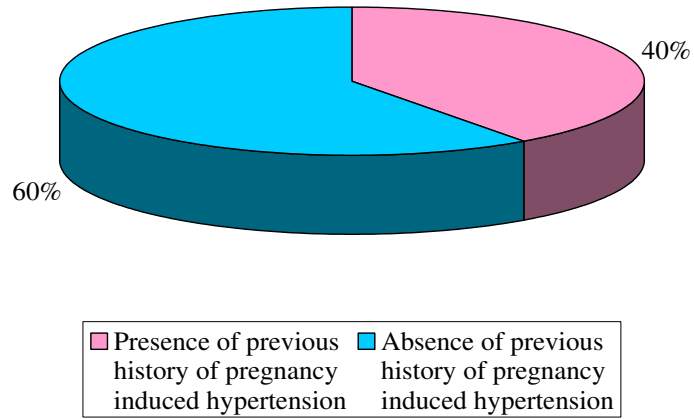
(N=5)

Obstetrical history	No. of Mothers	Percentage (%)
Past obstetrical history of PIH		
Yes	2	40
No	3	60
Period of PIH diagnosis in present pregnancy by weeks of gestation		
28 – 31	1	20
32 – 35	3	60
36 – 39	1	20

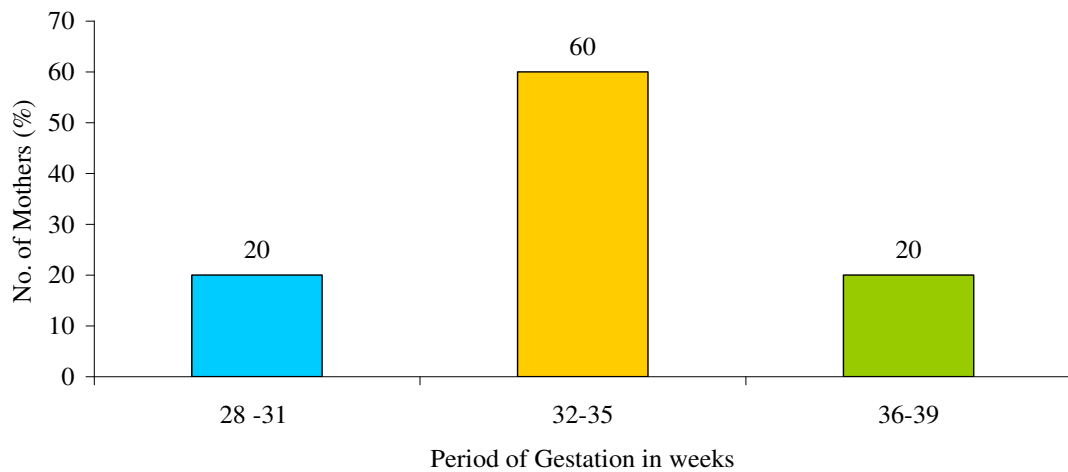
Distribution of mothers by past obstetrical history of pregnancy induced hypertension illustrates 40% of antenatal women had the history of pregnancy induced hypertension and 60% of antenatal women had no past history of pregnancy induced hypertension.

The distribution of mothers by period of diagnosis of pregnancy induced hypertension in present pregnancy shows that 60% of mothers were diagnosed as pregnancy induced hypertension between 32 – 35 weeks of gestation, 20% between 28 – 31 weeks of gestation and 20% between 36 – 39 weeks of gestation.

**FIG. 4.4.**  
**DISTRIBUTION OF MOTHERS BY PREVIOUS OBSTETRICAL**  
**HISTORY OF PREGNANCY INDUCED HYPERTENSION**



**FIG. 4.5.**  
**DISTRIBUTION OF MOTHERS BY PERIOD OF PREGNANCY**  
**INDUCED HYPERTENSION DIAGNOSIS IN PRESENT PREGNANCY**





## SECTION II

### 4.4. ANALYSIS ON INITIAL ASSESSMENT OF MOTHERS WITH PREGNANCY INDUCED HYPERTENSION

Initial assessment was done to ensure maternal and fetal well being. It included two components namely, assessment of maternal well being and assessment of fetal well being.

Among 5 mothers, 4 were normotensive under appropriate antihypertensive therapy. And one mother had elevated blood pressure reading of about 170/100 mm of Hg even with antihypertensive therapy at the time of admission. None of the mothers had any visual defects.

3 mothers did not have edema, while 2 mothers had edema and the score was +3 and +2 respectively. No abnormal weight gain was noted in all 5 mothers.

None of the mothers had any neurological complications like head ache, blurred vision, diplopia or seizures. Deep tendon reflex score was + 2 for all the mothers, which reflected normal neurological activity.

None of the mothers had any signs of pulmonary involvement like dyspnoea or abnormal breath sounds like rales.

None of the mothers had any signs of hepatic involvement like epigastric pain, nausea or vomiting.

Fetal well being was assessed by non stress test and ultrasonography report. Non stress test revealed a reactive pattern for all the foetuses. Ultrasonography revealed normal intra uterine growth appropriate for gestational age.

#### **4.5. ANALYSIS ON ONGOING ASSESSMENT OF MOTHER WITH PREGNANCY INDUCED HYPERTENSION**

Ongoing assessment was done to ensure maternal and fetal wellbeing. All mothers were assessed daily for identifying needs and problems and 1:1 nursing care was rendered.

Blood pressure was within the normal limits for 4 mothers. Blood pressure for one mother was unstable even with anti hypertensive therapy. Other vital signs like temperature, pulse and respiration were normal for all the mothers till the termination of nursing care.

Weight was checked and recorded daily. None of the mothers had abnormal weight gain. Urine was tested for the presence of albumin. 4 mothers did not report proteinuria, while one mother had proteinuria.

Among 5 mothers, 3 mothers did not develop edema, but 2 mothers had edema. The pedal edema score for the 1st mother was 3+ on initial assessment and reduced to 2+ on 5<sup>th</sup> day of nursing care. The pedal edema score for the 2nd mother was 2+ on initial assessment and reduced to 1+ on 2<sup>nd</sup> day of nursing care. Fluid intake and output was monitored and recorded for all the mothers which remained normal for all.

Neurological assessment was done daily to identify any signs of neurovascular irritability like headache, diplopia, blurred vision, abnormal deep tendon reflexes or seizures. 4 mothers did not develop any signs of neurological complications, while one mother reported headache on 7th day of nursing care since she had blood pressure fluctuations. Deep tendon reflex score was +2 for all the mothers.

Pulmonary assessment was done to identify any signs of pulmonary involvement like dyspnoea or abnormal breath sounds. None of the mothers developed pulmonary complications. Hepatic assessment was done daily to identify any signs of hepatic involvement like epigastric pain, nausea or vomiting. None of the mothers developed hepatic complications.

Fetal wellbeing was assessed by means of fetal heart rate, kick count for 12 hours and non stress test. All the foetuses were healthy as evidenced by regular and stable fetal heart rate, >3 kicks per hour and reactive pattern of non stress test

#### **4.6. ANALYSIS ON NURSING INTERVENTIONS TO MOTHERS WITH PREGNANCY INDUCED HYPERTENSION**

After assessment of mother, nursing care was provided individually according to their needs and problems. The basic physiological needs were identified and met.

Rest and sleep was encouraged for all the mothers. 1-2 hours of sleep during daytime and 8-10 hours of sleep during night was maintained. Bed rest was advised in left lateral position. Calm and quiet environment was provided and visitors were restricted to minimum.

High protein, moderate salt and iron rich diet was advised for all mothers. Protein rich diet like pulses, cereals, egg, milk, fish and chicken was encouraged. Moderate salt consumption of 4g/ day was advised. Also advised to avoid high salt containing foods like, pickles, papads, chips and junk food. Iron rich sources like, green leafy vegetables, raggi, drumstick, dates, jaggery etc was encouraged.

Blood pressure was monitored hourly. 4 mothers maintained normal blood pressure. Blood pressure fluctuation were noted in one mother on 7<sup>th</sup> day of nursing care. The blood pressure readings ranged between 140/100 mm of Hg and 200/110 mm of Hg. Antihypertensives were administered as per the order of the obstetrician.

Temperature, pulse and respiration was normal for all 5 mothers throughout the days of nursing care.

Edema was assessed daily. 3 mothers did not develop edema. But 2 mothers had pedal edema. 1<sup>st</sup> mother had pedal edema score of 3<sup>+</sup> and reduced to 2<sup>+</sup> by 5<sup>th</sup> day of nursing care. 2<sup>nd</sup> mother had pedal edema score of 2<sup>+</sup> and reduced to 1<sup>+</sup> by 2<sup>nd</sup> day of nursing care. Limb was elevated to reduce edema. Moderate salt consumption was advised to mothers who had edema to reduce fluid retention.

Urine was tested for the presence of albumin. 4 mothers did not have proteinuria. But proteinuria was noted in one mother with score of 1<sup>+</sup>. Protein rich diet was advised for the mother. Fluid intake and output chart was maintained to identify fluid volume imbalance. Weight was checked daily to note any fluid retention in the body. No abnormal weight gain was noted for all the mothers.

Neurological assessment was done daily. Four mothers did not have any signs of neurovascular irritability. One mother reported head ache and the blood pressure at that time was 170/100 mm/Hg. T.Calcigard 10 mg stat dose was administered, and blood pressure was reduced to 120/70 mm of Hg after 15 minutes and head ache was resolved. Deep tendon reflexes were assessed daily. All mothers had score 2<sup>+</sup> which was normal.

Pulmonary assessment was done daily which revealed no signs of pulmonary complication in all mothers. None of the mothers developed any signs of hepatic involvement.

Psychological support was given to the mother to reduce her anxiety. Deep breathing exercises were taught and diversional therapy like reading books, listening music and praying was encouraged. One mother had undergone training in meditation and yoga and she was encouraged for the same in the hospital to reduce stress. Mothers were encouraged to ventilate their feelings and concerns.

Health education was given on pregnancy induced hypertension, its signs and symptoms, and alarming signs of complications. Importance of rest, sleep and diet was emphasized daily. Therapeutic regimen prescribed by the obstetrician was followed regularly and promptly.

Fetal wellbeing was also assessed by non stress test every 8<sup>th</sup> hourly. Daily fetal kick count monitoring was taught to the mother and the counts were calculated for 12 hours. Fetal heart rate was monitored hourly.

Based on the identified needs and problems of mothers with pregnancy induced hypertension, a nursing care module was prepared.

#### **4.7. ANALYSIS ON EVALUATION OF MOTHERS WITH PREGNANCY INDUCED HYPERTENSION AFTER NURSING INTERVENTIONS.**

Nursing care was provided to all mothers in 1:1 nurse patient ratio. Evaluation of nursing care was done before termination of care.

Blood pressure was stabilized for 4 mothers. One mother got discharged after ensuring maternal and fetal well being. Two mothers underwent elective caesarean section. One mother had severe blood pressure fluctuation and was taken up for emergency caesarean section. One mother had preterm labour and she was taken up for emergency caesarean section. And among the 4 caesarean sections, one was term, 2 were moderately preterm and one was extreme preterm. In view of preterm delivery, babies were kept in neonatal intensive care unit. Mother's health was satisfactory and did not develop any complications.

None of the mothers developed any neurological, pulmonary or hepatic complications. Among 5 mothers, 4 mothers had a healthy labour outcome.

## **RESULTS AND DISCUSSION**

The study was conducted in antenatal ward of Sri Ramakrishna Hospital, Coimbatore. The main focus of the study was to provide comprehensive nursing care to mothers with pregnancy induced hypertension. Initial assessment was done to ensure maternal and fetal wellbeing and ongoing assessment was done till termination of nursing care. Nursing care was given on the basis of needs and problems identified.

The care of women with pregnancy induced hypertension is concentrated to bring out a healthy labour outcome. The main aim is to deliver a healthy baby in optimal time with minimum maternal and neonatal mortality and morbidity (Jacob, 2008).

### **5.1. DEMOGRAPHIC DATA**

#### **5.1.1. Age**

In relation to age distribution, majority of mothers (40%), with pregnancy induced hypertension were in the age group of 26-30 years. According to Peterson 2010, the risk age group for pregnancy induced hypertension is below 20years and above 40 years. But in the present study, the age of mothers ranged between 20 – 40 years.

#### **5.1.2. Obstetrical score**

Among 5 mothers, 60% were multigravida and 40% were primigravida. Among 60% of multigravida, 67% had previous history of pregnancy induced hypertension in first pregnancy which resulted in intra uterine death.

## **5.2. FAMILY HISTORY**

### **5.2.1. Hypertension**

Among 5 mothers, 40% reported history of hypertension in their family. 60% did not have any family history of hypertension. Barclay (2003) states that family history of hypertension, predispose women to develop pregnancy-induced hypertension.

## **5.3. OBSTETRICAL HISTORY**

### **5.3.1. Past obstetrical history**

Among 5 mothers, 40% had past obstetrical history of pregnancy induced hypertension and 60% were primigravida.

2 mothers had history of intra uterine death due to pregnancy induced hypertension and one mother had history of medical termination of pregnancy due to anomalous foetus.

Recurrence of pregnancy induced hypertension in subsequent pregnancy is about 65% higher according to Susan & Judy (2000).

### **5.3.2. Present obstetrical history**

Majority of mothers (60%), were diagnosed as pregnancy induced hypertension at 33<sup>rd</sup> weeks of gestation, 20% were diagnosed at 28<sup>th</sup> week and 20% were diagnosed as pregnancy induced hypertension at 37<sup>th</sup> week of gestation.

In the present study all the mothers were diagnosed as pregnancy induced hypertension in the last trimester.



#### **5.4. INITIAL ASSESSMENT OF MOTHER WITH PREGNANCY INDUCED HYPERTENSION**

Initial assessment was done to assess the maternal and fetal wellbeing. All mothers were assessed to identify needs and problems.

Among 5 mothers, 4 were normotensive and one mother had elevated blood pressure reading (170/100 mm of Hg) on initial assessment. None of the mothers had any visual defects.

3 mothers did not have edema, while 2 mothers had edema and the score was +3 and +2 respectively. Deep tendon reflex score was + 2 for all the mothers, which reflected normal neurological activity.

None of the mothers had any signs of neurological, pulmonary, or hepatic complications.

Fetal wellbeing was assessed by non stress test and ultrasonography. Non stress test revealed a reactive pattern for all babies. Ultrasonography report revealed normal intra uterine growth appropriate for gestational age.

#### **5.5. ONGOING ASSESSMENT OF MOTHER WITH PREGNANCY INDUCED HYPERTENSION**

Ongoing assessment was done to ensure maternal and fetal wellbeing. All mothers were assessed daily for identifying needs and problems and nursing care was rendered in 1:1 nurse patient ratio.

Blood pressure was within the normal limits for 4 mothers. Blood pressure for one mother was unstable even with anti hypertensive therapy. Other vital signs like temperature, pulse and respiration were normal for all the mothers till the termination of nursing care.

The mothers were weighed daily and recorded. None of the mothers had abnormal weight gain. Urine was tested for the presence of albumin. 4 mothers did not develop proteinuria, while one mother had proteinuria. According to Pillitteri (2007), proteinuria does not develop in mothers with gestational hypertension but a mother with pre eclampsia develops proteinuria along with edema and hypertension.

During the period of study edema was assessed daily. Among 5 mothers, 3 mothers did not develop edema, but 2 mothers had edema. The pedal edema score for 1<sup>st</sup> mother was 3+ on initial assessment and reduced to 2+ on 5<sup>th</sup> day of nursing care. The pedal edema score for 2<sup>nd</sup> mother was 2+ on initial assessment and reduced to 1+ on 2<sup>nd</sup> day of nursing care. Fluid intake and output was monitored and recorded for all the mothers which remained normal for all.

Mothers were closely monitored to identify early signs of complications. Neurological assessment was done daily to identify any signs of neurovascular irritability like headache, diplopia, blurred vision, abnormal deep tendon reflex, and seizures. Deep tendon reflex score was +2 for all the mothers which was normal. 4 mothers did not develop any signs of neurological complications, while one mother reported headache on 7th day of nursing care since she had severe blood pressure fluctuation.

Pulmonary assessment was done to identify any signs of pulmonary involvement like dyspnoea or abnormal breath sounds. None of the mothers developed pulmonary complications. Hepatic assessment was done daily to identify any signs of hepatic involvement like epigastric pain, nausea or vomiting. None of the mothers developed hepatic complications.

Fetal wellbeing (fetal heart rate and fetal movements) was assessed by means of fetoscope, fetal kick chart and cardiotocography. Fetal movement count was calculated for 12 hours. All the foetuses were healthy as evidenced by regular and stable fetal heart rate, >3 kicks per hour and reactive pattern of non stress test

## **5.6. NURSING INTERVENTIONS TO MOTHERS WITH PREGNANCY INDUCED HYPERTENSION**

After assessment of mother, nursing care was provided individually according to their needs and problems. The basic physiological needs were identified and met.

Rest and sleep was encouraged for all the mothers. 1-2 hours of sleep during daytime and 8-10 hours of sleep during night was advised. Bed rest was advised in left lateral position. Calm and quiet environment was provided and visitors were restricted to minimum.

High protein, moderate salt and iron rich diet was advised for all mothers. Protein rich diet like pulses, cereals, egg, milk, fish and chicken was encouraged. Moderate salt consumption of 4g/ day was advised. Also mothers were advised to avoid high salt containing foods like, pickles, papads, chips and junk food. Iron rich

diet like, green leafy vegetables, raggi, drumstick, dates, jaggery and fenugreek etc was encouraged.

Blood pressure was monitored hourly. Antihypertensives were administered as per the order of the obstetrician.

Limbs were elevated to reduce edema. Urine was tested for the presence of albumin. Fluid intake and output chart was maintained to identify fluid volume imbalance. Weight was checked daily to note any fluid retention in the body.

Psychological support was given to the mother to reduce her anxiety. According to Black (2007), stress is more in mothers diagnosed with pregnancy induced hypertension and nurses can help to reduce stress levels. Deep breathing exercises were taught and diversional therapy like reading books, listening music, and praying, was encouraged. One mother had undergone training in meditation and yoga. The mother was encouraged for the same in the hospital to reduce stress. Mothers were encouraged to ventilate her feelings and concerns.

Health education was given on pregnancy induced hypertension, its signs and symptoms, and alarming signs of complications. Importance of rest, sleep and diet was emphasized daily. Therapeutic regimen prescribed by the obstetrician was followed regularly and promptly.

Fetal wellbeing was also assessed by non stress test every 8<sup>th</sup> hourly. Daily fetal kick count monitoring was taught to the mother and the counts were calculated for 12 hours. Fetal heart rate was monitored hourly.

Based on the identified needs and problems of mothers with pregnancy induced hypertension, a nursing care module was prepared.

### **5.7. EVALUATION OF MOTHER WITH PREGNANCY INDUCED HYPERTENSION AFTER NURSING CARE**

4 mothers were normotensive. Blood pressure was under control except for one mother. She had severe blood pressure fluctuation. Temperature, pulse and respiratory rate were normal for all mothers. Fluid intake and output was normal for all the mothers. Edema was noted for 2 mothers and it was reduced by 5<sup>th</sup> and 2<sup>nd</sup> day of nursing care respectively. Deep tendon reflexes were normal for all mothers. One mother reported headache due to severe blood pressure fluctuation and no other neurological complications were identified. None of the mothers developed any pulmonary or hepatic complications. Fetal health was satisfactory as evidenced by reactive pattern of non stress test, regular fetal heart rate and kick count more than 3 per hour.

Among 5 mothers, one mother got discharged after ensuring maternal and fetal wellbeing. Remaining 4 mothers underwent caesarean section. Among 4 caesarean sections, 2 were elective and 2 were emergency surgeries. And among the 4 caesarean sections, one was term, 2 were moderately preterm and one was extreme preterm. In view of preterm delivery, babies were kept in neonatal intensive care unit. Mother's health was satisfactory and did not develop any complications. These results correlate with a study conducted by Onyiriuka (2007), which reveals that caesarean section delivery rate is significantly higher in hypertensive mothers.

A study conducted in Jawaharlal institute of post graduate medical education and research found that there was a higher incidence of preterm babies among infants of pregnancy induced hypertension mothers ( Sivakumar, Badhe &Bhat, 2009) which is in line with present study.

This result correlates with the study conducted by Gracia, Rueda & Smith(2005). They identified that intensive monitoring of clinical status of mother was associated with low morbidity and the absence of maternal deaths.

This result is also in line with a study conducted by Philippino nursing students in 2002, which revealed that prompt nursing care for mothers with pregnancy induced hypertension can reduce the maternal and fetal mortality and morbidity which is successful in terms of healthy maternal and fetal outcome.

A study conducted by Mourad (2008), is in line with the present study. He states that, strict hemodynamic monitoring and management by the nurses is required to prevent complications such as eclampsia, DIC, HELLP syndrome and maternal/fetal death.

Walker (1996), states that a logical stepwise management structure is needed to make sure all women at risk gets the best care available. Hence a nursing care module for mothers with pregnancy induced hypertension was formulated by the researcher.

## SUMMARY AND CONCLUSION

Early detection and management of preeclampsia are associated with the greatest success in reducing risks and progression of condition. A woman with severe pre eclampsia has multiple problems and is a tremendous challenge for the health care team. Nurses caring for such women need a strong knowledge of the disease process, treatment regimen and possible complications to the mother and foetus (Bobak & Irene, 1994).

This study was conducted to provide nursing interventions to mothers with pregnancy induced hypertension. Initial assessment was done to ensure maternal and fetal wellbeing and ongoing assessment was done till the termination of nursing care. Orlando's nursing process model was used to conceptualize the nursing care for mothers with pregnancy induced hypertension. It focuses on making plan to solve problem, stating and implementing the plan and evaluating the extend to which the plan was effective in promoting optimum wellness.

A descriptive case study design was adopted to provide nursing care for mothers with pregnancy induced hypertension. The study was conducted in antenatal ward of Sri Ramakrishna Hospital, Coimbatore. Convenient sample of 5 mothers were selected for the main study.

The content validity of the tool was tested through pilot study. Nursing assessment tool consists of demographic data, family history, obstetrical history, investigations and physical examination. Nursing care plan was prepared based on the

needs and problems of the mother who is diagnosed as pregnancy induced hypertension.

The prime focus of the present research is that nursing care for mothers with pregnancy induced hypertension was rendered in 1:1 nurse patient ratio to promote comfort of the mother and to prevent complications.

### **6.1. FINDINGS OF THE STUDY**

1. The risk age group for pregnancy induced hypertension is below 20yrs and above 40yrs, but in the present study the age of mothers ranged between 20-40yrs.
2. Two mothers had previous history of pregnancy induced hypertension which resulted in intrauterine fetal death.
3. None of the mothers developed neurological complications.
4. None of the mothers developed pulmonary complications.
5. None of the mothers developed hepatic complications.
6. Two mothers had pedal edema.
7. One mother had proteinuria.
8. One mother wanted their close relative to be with them in antenatal ward.
9. One mother got discharged after ensuring maternal and fetal wellbeing.
10. 4 mothers were obese, where obesity is a risk factor for pregnancy induced hypertension.
11. 4 mothers underwent caesarean section, among which 2 mothers had emergency surgery and 2 mothers had elective caesarean section.



12. All mothers reported that ventilation of their feelings helped to reduced anxiety.
13. A nursing care module was prepared for staff nurses working in antenatal ward to care for mother with pregnancy induced hypertension.
14. The highlight of the present study was 1:1 nurse patient ratio helped to manage the mother with pregnancy induced hypertension.

## **6.2. LIMITATION OF THE STUDY**

The study was limited to fewer number of samples

## **6.3. SUGGESTIONS FOR FURTHER STUDY**

1. A study can be conducted to assess the self care activities of mothers with pregnancy induced hypertension after a structured teaching programme on self care.
2. A study can be conducted to assess the labour outcome of mothers with pregnancy induced hypertension.
3. A study can be conducted to assess the life experiences of mothers with pregnancy induced hypertension.

## **6.4. RECOMMENDATIONS**

1. 1:1 nurse patient care can be implemented in antenatal ward for mother with pregnancy induced hypertension.
2. Nurses working in antenatal ward can be taught on care of mother with pregnancy induced hypertension using a nursing care module.
3. Alternative and complementary therapies can be taught to reduce blood pressure for mothers with pregnancy induced hypertension.

## **6.5. CONCLUSION**

The study has emphasized that planned nursing interventions after assessing the needs and problems of mothers with pregnancy induced hypertension will prevent complications and promote maternal and fetal well being. Nurses, with their scientific knowledge on care of mothers with pregnancy induced hypertension can provide logical and systematic care based on a prepared module. It is also necessary to have skill and compassion to take care of mothers with pregnancy induced hypertension. Hence, nurses can help the mothers with pregnancy induced hypertension to achieve a healthy labour outcome.

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## APPENDIX - I

### LETTER SEEKING PERMISSION FOR CONDUCTION OF RESEARCH STUDY

**From,**

Ms. Viny Varghese,  
M.Sc. Nursing 1<sup>st</sup> Year  
College of Nursing  
Sri Ramakrishna Institute of Paramedical Sciences,  
Coimbatore

**To**

**Dr. Lalitha, M.B.B.S., D.G.O.,**  
Department of Obstetrics & Gynaecology,  
Sri Ramakrishna Hospital,  
Coimbatore - 641 044.

**Through**

**The Principal**

College of Nursing  
Sri Ramakrishna Institute of Paramedical Sciences,  
Coimbatore

**Subject:** Letter Requesting Permission for Conduction the Research Study

**Respected Sir,**

I Viny Varghese doing my M.Sc. Nursing 1<sup>st</sup> Year in College of Nursing, Sri Ramakrishna Institute of Paramedical Sciences, as a part of my curriculum requirement under Dr. M.G.R. University to conduct Research, I have been allotted for the research study on "Nursing Care of mothers with pregnancy induced hypertension in Sri Ramakrishna Hospital, Coimbatore".

I hereby request you to permit me for conducting the research during the month of April and June-2010 in your well established hospital. I assure you that, I will adhere to your rules and regulations. So, kindly do the needful for me. I am grateful to you, when I have been given an opportunity to do my research in your hospital.


Thanking you

Coimbatore

Date: 16.4.2010

Yours Sincerely  
  
(VINY VARGHESE)

  
PRINCIPAL  
College of Nursing,  
Sri Ramakrishna Institute of Paramedical Sciences,  
Coimbatore - 641 044.

  
18.4.2010

## APPENDIX - II

### FORMAT FOR CONTENT VALIDITY

Name of the expert : MRS. ESTHER JOHN  
Address : PRINCIPAL  
GANGA COLLEGE OF NURSING.

Total content for the tool : Adequate/ Inadequate

Kindly validate each tool and tick wherever applicable.

Sl. No.	No. of tool selection	Strongly agree	Agree	Need modification	Remarks
1.	Section - 1				
2.	Section - 2				
3.	Section - 3				
4.	Section - 4				
5.	Section - 5				

Date:

  
Signature of the Expert



#### FORMAT FOR CONTENT VALIDITY

Name of the expert : MRS. RENUKA . S  
Address : ASSOCIATE PROFESSOR  
DEPT OF OBG NURSING  
KMCH COLLEGE OF NURSING  
KMCH CAMPUS  
AVINASHI ROAD  
COIMBATORE - 14

Total content for the tool : ☒ Adequate/ ☐ Inadequate

Kindly validate each tool and tick wherever applicable.

Sl. No.	No. of tool selection	Strongly agree	Agree	Need modification	Remarks
1.	Section - 1		<input checked="" type="checkbox"/>		
2.	Section - 2		<input checked="" type="checkbox"/>		
3.	Section - 3		<input checked="" type="checkbox"/>		
4.	Section - 4		<input checked="" type="checkbox"/>		
5.	Section - 5		<input checked="" type="checkbox"/>		

Date: 3.6.2010

*S. Renuka*  
Signature of the Expert

# FORMAT FOR CONTENT VALIDITY

Name of the expert : Ms. D. CHARMINI JEBAPRIYA


Address : PRINCIPAL,  
TEXCITY COLLEGE OF NURSING,  
PODANUR MAIN ROAD,  
PODANUR.  
CBE-23.

Total content for the tool : Adequate/ Inadequate

Kindly validate each tool and tick wherever applicable.

Sl. No.	No. of tool selection	Strongly agree	Agree	Need modification	Remarks
1.	Section - 1		✓		
2.	Section - 2		✓		
3.	Section - 3		✓		
4.	Section - 4		✓		
5.	Section - 5		✓		

Date: 2/6/10.

  
Signature of the Expert

PRINCIPAL,  
Texcity College of Nursing,  
Podanur Main Road, Coimbatore-23

## **APPENDIX – III**

### **ASSESSMENT TOOL**

#### **I. DEMOGRAPHIC PROFILE**

Sample No. :  
Age :  
Education :  
Occupation :  
Obstetrical Score :  
LMP :  
EDD :  
Period of Gestation :  
Date of admission :  
Ward :

#### **II. FAMILY HISTORY**

History of medical/ pregnancy related problems

Pregnancy induced hypertension : No/yes  
Hypertension : No/yes  
Gestational diabetes mellitus : No/yes

### III. OBSTETRICAL HISTORY

### 3.1. Past Obstetrical History

[illegible]

### 3.2. PRESENT OBSTETRICAL DATA

[illegible]

[illegible]

#### **IV. PHYSICAL EXAMINATION – ON ADMISSION**

##### **4.1. MATERNAL WELL BEING**

1. Height :

2. Weight :

3. Body built :

4. Orientation :

5. Vital Signs

Blood pressure :

Temperature :

Pulse :

Respiration :

6. Eyes

Vision : Diplopia : No/ Yes

Blurred Vision: No/ Yes

Conjunctiva :

Periorbital edema :

7. Neck

Lymph nodes :

Thyroid :

Jugular vein distention:

Carotid pulsation :

8. Chest

Respiration :

Heart sounds :

Heart rate :

Difficult in breathing : Absent/ present

#### 9. Extremities

Oedema : pedal/ hands/ generalised

Pitting edema score : 1+/2+/3+/4+

Pulsation :

Tremors :

Range of motion :

Deep tendon reflexes : +1/+2/+3/+4/+5

### OBSTETRICAL EXAMINATION

#### Abdomen

##### Inspection

Shape :

Size :

Contour :

Visible fetal movements :

Scars :

Veins :

Skin changes :

##### Abdominal girth

**Fundal height measurement :**

Height of fundus in cm :

Height of fundus in finger  
breadth method :

##### Palpation

Fundal palpation :

Lateral palpation :

Right :



Left	:
Pelvic palpation	:
Grip I	:
Pawlick grip	:
Combined grip	:

**Auscultation**

Location of FHR	:
FHR/min	:

**Summary findings**

Lie	:
Attitude	:
Presentation	:
Position	:
Engagement	:
FHR	:

**Perineum**

Edema	:
Any other	:

**4.2. FETAL WELLBEING**

Non stress test	:
Ultrasonography report	:

#### 4.3. INVESTIGATION

Sl. No.	Investigation	Mother's value	Normal value	Inference

## APPENDIX -IV

### V. ONGOING ASSESSMENT

#### 5.1. MATERNAL WELL BEING

PARAMETERS	MATERNAL WELL BEING						
DAYS	1	2	3	4	5	6	7
<ul style="list-style-type: none"><li>• Vital signs<ul style="list-style-type: none"><li>• Blood pressure (mm of Hg)</li><li>• Temperature (F)</li><li>• Pulse (beats/mt)</li><li>• Respiration (breaths/mt)</li></ul></li><li>• Weight (kg)</li><li>• Urine-albumin</li><li>• Edema assessment</li><li>• Fluid intake and output (ml)</li><li>• Deep tendon reflexes</li></ul>					]		

## Neurological Assessment

DAY	ASSESSMENT FINDINGS
1	
2	
3	
4	
5	
6	
7	

## Hepatic Assessment

DAY	ASSESSMENT FINDINGS
1	
2	
3	
4	
5	
6	
7	

### **Pulmonary Assessment**

<b>DAY</b>	<b>ASSESSMENT FINDINGS</b>
<b>1</b>	
<b>2</b>	
<b>3</b>	
<b>4</b>	
<b>5</b>	
<b>6</b>	
<b>7</b>	

### **Seizures**

<b>DAY</b>	<b>ASSESSMENT FINDINGS</b>
<b>1</b>	
<b>2</b>	
<b>3</b>	
<b>4</b>	
<b>5</b>	
<b>6</b>	
<b>7</b>	

5.2. FETAL WELL BEING

PARAMETERS	FETAL WELL BEING						
DAYS	1	2	3	4	5	6	7
Fetal heart rate (beats/min)							
Kick count for 12 hours							
Non stress test							

## APPENDIX-V

### VI. NURSING INTERVENTIONS FOR MOTHER WITH PREGNANCY INDUCED HYPERTENSION

NURSING DIAGNOSIS	GOAL	NURSING INTERVENTIONS	RATIONALE	EVALUATION
Ineffective tissue perfusion, related to fluid shift from intravascular to intracellular space	Mother will maintain her normal tissue perfusion	<ul style="list-style-type: none"> <li>- Assess for edema in pedal, periorbital, sacral, face and vulval region.</li> <li>- Weigh the mother daily in the morning after emptying bladder and before breakfast</li> <li>- Assess pitting edema using edema scale</li> <li>- Maintain intake and output chart</li> <li>- Advise to consume moderate salt</li> </ul>	<ul style="list-style-type: none"> <li>- Helps to evaluate abnormal tissue fluid retention in the body</li> <li>- To assess the progressive increase in extra vascular fluid</li> <li>- To assess the severity of edema</li> <li>- Helps to know renal function</li> <li>- Helps to prevent fluid retention</li> </ul>	Edema will be reduced
Imbalanced nutrition less than body requirement related to proteinuria	Lost protein will be replaced by supplemental protein	<ul style="list-style-type: none"> <li>- Monitor urine albumin daily</li> <li>- Advice for high protein diet of animal and vegetable origin like grams, pulses, fish, egg, cereals etc.,</li> <li>- Supplement protein as advised by physician</li> <li>- Intravenous maintenance of amniodrip as per prescription</li> </ul>	<ul style="list-style-type: none"> <li>- Helps to know the amount of protein lost</li> <li>- Protein acts as liver protective and corrects hypoalbuminemia</li> <li>- Helps to supplement the lost protein</li> </ul>	Serum protein level will be increased gradually

<b>NURSING DIAGNOSIS</b>	<b>GOAL</b>	<b>NURSING INTERVENTIONS</b>	<b>RATIONALE</b>	<b>EVALUATION</b>
Fluid volume excess related to edema	The mother will maintain normal fluid volume level	<ul style="list-style-type: none"> <li>- Assess for degree of pitting edema</li> <li>- Maintain intake output chart</li> <li>- Maintain weight record</li> <li>- Elevate limbs over pillows</li> <li>- Advice for moderate salt intake</li> </ul>	<p>Helps to evaluate abnormal tissue fluid retention in the body</p> <p>To know the renal functioning.</p> <p>To identify any abnormal weight gain.</p> <p>Helps to improve venous return</p> <p>Helps to prevent fluid retention.</p>	Mother maintains normal fluid volume level
Anxiety related to restricted activities and risk for fetal injury	Mother's anxiety will be minimized	<ul style="list-style-type: none"> <li>- Evaluate family resources and mother's responsibilities</li> <li>- Assess for problems related to hospitalization such as work, child care, house hold activities</li> <li>- Provide opportunity for mother to express feeling of anxiety</li> <li>- Keep mother informed of progress</li> <li>- Provide psychological support and counseling</li> </ul>	<p>Verbalization can provide opportunities for clarification of feeling and concern</p> <p>Helps to reduce anxiety</p>	Mother verbalized understanding and experiences less anxiety



<b>NURSING DIAGNOSIS</b>	<b>GOAL</b>	<b>NURSING INTERVENTIONS</b>	<b>RATIONALE</b>	<b>EVALUATION</b>
Impaired urinary elimination related to decreased glomerulo filtration secondary to afferent vessel spasm	The mother will maintain normal urine output	<ul style="list-style-type: none"> <li>- Measure and record urine output</li> <li>- Record all types of oral fluids and intravenous fluids</li> <li>- Notify the physician if urine output is less than 30ml/hour</li> <li>- Indwelling catheterization for severe cases</li> </ul>	<p>Helps to evaluate the renal function</p> <p>Helps for early initiation of treatment</p> <p>Facilitates more accurate assessment of renal function and effect of therapy</p>	Urinary elimination remains within normal limits.
Decreased cardiac output related to decreased venous return	The mother will participate in activities that reduce blood pressure or cardiac work load	<ul style="list-style-type: none"> <li>- Monitor blood pressure of the mother.</li> <li>- Observe skin color, moisture, temperature and capillary refill time.</li> <li>- Note dependent/general edema.</li> </ul>	<p>Helps to evaluate maternal condition.</p> <p>Presence of pallor, cool, moist, skin and delayed capillary refill time may be due to peripheral vasoconstriction.</p> <p>May indicate heart failure, renal or vascular impairment</p> <p>Help reduce sympathetic stimulation, promotes relaxation.</p>	After the nursing interventions the mother is able to participate in activities that decrease blood pressure and cardiac work load

NURSING DIAGNOSIS	GOAL	NURSING INTERVENTIONS	RATIONALE	EVALUATION
		<ul style="list-style-type: none"> <li>- Provide calm restful surrounding, minimize environmental activity or noise</li> <li>- Maintain activity restriction.</li> <li>- Instruct on relaxation techniques.</li> </ul>	<p>Decreases physical stress and tension that affect blood pressure.</p> <p>Decreases blood pressure</p>	
Ineffective coping related to hospitalization	Mother will be able to cope with the situation	<ul style="list-style-type: none"> <li>- Establish a working relationship with mother through continuity of care.</li> <li>- Provide opportunity to express concern, fear, feelings and expectations.</li> <li>- Convey feeling of acceptance and understanding. Avoid false reassurance.</li> <li>- Encourage mother to identify own strengths and abilities</li> <li>- Reduce stimuli in environment that could be misinterpreted as threatening</li> </ul>	<p>An ongoing relationship with mother establishes trust. Decreases the feeling of isolation and facilitates coping.</p> <p>Verbalization of actual or perceived threats can help to decrease anxiety.</p> <p>Fostering awareness can expedite use of these strengths.</p>	Mother is able to cope with the situation.

<b>NURSING DIAGNOSIS</b>	<b>GOAL</b>	<b>NURSING INTERVENTIONS</b>	<b>RATIONALE</b>	<b>EVALUATION</b>
Impaired sensory perception related to loss of consciousness and seizures	Mother will regain consciousness and free from seizures	<ul style="list-style-type: none"> <li>- Assess level of consciousness periodically.</li> <li>- Decrease environmental stimuli.</li> <li>- Dimly lit the room, limit noise and visitors.</li> <li>- Cluster nursing procedures in the same time as possible.</li> <li>- Promote rest and sleep</li> </ul>	<p>Helps to know alteration in consciousness</p> <p>Bright light and noise trigger the central nervous system Frequent nursing procedures disturb mother.</p>	Mother remains quiet and further seizures are prevented.
Knowledge deficit regarding disease condition and further management at home	Mother and her family will gain knowledge regarding home care management	<ul style="list-style-type: none"> <li>- Keep the couple informed about adequate rest at home 2 hours in afternoon, 8-10 hrs at night</li> <li>- Teach mother about kick count and self administration of drugs.</li> <li>- Advice for dietary modification such as moderate salt, rich protein and more fluids.</li> <li>- Encourage for antenatal visit once a week</li> </ul>	<p>Participation in self care and planning can aid positive coping.</p> <p>Can ascertain fetal well being.</p> <p>Helps to reduce disease progression.</p>	Mother expresses understanding and the need about frequent visit to hospital

<b>NURSING DIAGNOSIS</b>	<b>GOAL</b>	<b>NURSING INTERVENTIONS</b>	<b>RATIONALE</b>	<b>EVALUATION</b>
Risk for epigastric pain related to hepatic edema and capsular haemorrhage	Mother will not experience epigastric pain	<ul style="list-style-type: none"> <li>- Assess for epigastric pain, location, intensity and tenderness</li> <li>- Monitor liver function test</li> <li>- Notify immediately to doctor if laboratory value of liver function test is abnormal</li> </ul>	<p>Helps to identify hepatic involvement</p> <p>Helps to know the severity</p> <p>Helps to initiate prompt treatment at the earliest</p>	Mother does not develop epigastric pain.
Risk for cerebral haemorrhage related to hypertension greater than 110mm of Hg (diastolic)	Mother will not develop cerebral haemorrhage.	<ul style="list-style-type: none"> <li>- Monitor blood pressure hourly and record</li> <li>- Provide adequate rest and comfort</li> <li>- Administer drugs as prescribed</li> <li>- Keep physician informed of blood pressure changes</li> </ul>	<p>Early detection can help for further deterioration of condition</p> <p>Helps to initiate early and prompt treatment at time</p>	Mother maintains stable blood pressure
Risk for complication of abruptio placenta related to hyper irritability of the uterus	Mother will not develop placental complications	<ul style="list-style-type: none"> <li>- Assess for uterine tenderness, low back pain and uterine rigidity</li> <li>- Assess for vaginal bleeding</li> <li>- Notify immediately to doctor if there is subtle changes</li> </ul>	<p>Mother with severe pre-eclampsia often develop premature separation of placenta</p> <p>Helps to know separation of placenta</p> <p>Help to initiate earlier treatment</p>	Mother does not develop signs of abruption placenta

<b>NURSING DIAGNOSIS</b>	<b>GOAL</b>	<b>NURSING INTERVENTIONS</b>	<b>RATIONALE</b>	<b>EVALUATION</b>
Risk for fetal distress related to utero placental insufficiency	The fetus will be prevented from distress	<ul style="list-style-type: none"> <li>- Auscultate fetal heart rate every hourly.</li> <li>- Encourage the mother to maintain kick count</li> <li>- Place the mother in left lateral position.</li> <li>- Monitor non stress test daily</li> </ul>	<p>Helps to assess fetal well being</p> <p>Kick is a sign of good health. &lt;3 per hour need further evaluation.</p> <p>It increases uterine blood flow and prevents supine hypotension</p> <p>Diminished placental perfusion places the fetus at risk.</p>	Fetal heart rate remains stable, kick count is >3 kick/hr and reactive non stress test.

NURSING DIAGNOSIS	GOAL	NURSING INTERVENTIONS	RATIONALE	EVALUATION
Risk for anxiety related to fear of residual hypertension, fear of recurrence of condition in future pregnancies, fear for neonate's wellbeing.	Parents will experience relief from anxiety	<ul style="list-style-type: none"> <li>- Assess parents level of concern and fears.</li> <li>- Encourage to express fears and concern.</li> <li>- Instruct the mother that PIH does not lead to chronic hypertension and instruct that pre-eclampsia does not reoccur in a subsequent pregnancy unless one of the major predisposing factors is present such as diabetes mellitus, multiple gestation etc.</li> </ul>	<p>Helps to know severity of anxiety and fear</p> <p>Verbalization aids in relaxation of worries</p> <p>Help them to make aware that normal values usually return by ten day after delivery</p>	Fear and anxiety is relieved or kept to minimum

## **APPENDIX - VI**

### **NURSING CARE MODULE FOR MOTHERS WITH PREGNANCY**

#### **INDUCED HYPERTENSION**

**SETTING** : Sri Ramakrishna hospital, Coimbatore

**PREPARED BY** : Investigator

**APPROVED BY** : **Dr. Mrs. R.Lalitha MBBS, DGO**  
Consultant Obstetrician & gynaecologist,  
Sri Ramakrishna Hospital,  
Coimbatore.

#### **OBJECTIVE**

1. To promote maternal and fetal wellbeing in mothers with pregnancy induced hypertension.
2. To reduce the complications in mothers with pregnancy induced hypertension.

#### **PURPOSE:**

To provide a standard protocol for staff nurses working in OBG ward, Sri Ramakrishna Hospital, Coimbatore, in care of mother with pregnancy induced hypertension.

## **PROTOCOL AND PROCEDURES FOR MOTHERS WITH PREGNANCY INDUCED HYPERTENSION**

I. All pregnancy induced hypertension mothers should be kept as close as possible to the nurses station.

II. Continuous observation

### **1) TO REDUCE BLOOD PRESSURE.**

- a) Record blood pressure every 2<sup>nd</sup> hourly or as frequently.
- b) Encourage bed rest in left lateral position.
- c) Limit ambulation except for toilet.
- d) Minimize hospital noise and visitors.
- e) Advise for moderate salt intake.
- f) Administer antihypertensive as ordered by physician.

### **2) TO REDUCE EDEMA.**

- a) Assess for edema in pedal, periorbital, sacral region, face and vulva.
- b) Assess pitting edema using edema scale.
- c) Record weight daily in the morning after emptying the bladder and before breakfast.
- d) Maintain intake and output chart.
- e) Elevate limbs over pillows.
- f) Advise to consume moderate salt.
- g) Advise for high protein diet like pulses, cereals, fish, egg, meat etc

### **3) NUTRITIONAL MANAGEMENT**

- a) Monitor urine albumin daily.



- b) Advise for high protein diet like pulses, cereals, fish, egg, meat etc
- c) Advise to consume moderate salt.
- d) Supplement protein as advised by physician

#### **4) TO PREVENT DECREASED CARDIAC OUTPUT**

- a) Monitor blood pressure,
- b) Observe skin colour, moisture, temperature and capillary refill time.
- c) Note dependent or general edema.
- d) Provide calm restful surrounding, minimize environmental noises.
- e) Maintain activity restriction.
- f) Administer antihypertensive as ordered by physician.

#### **5) TO REDUCE ANXIETY**

- a) Encourage verbalization of problems.
- b) Provide opportunity for mother to express feeling of anxiety.
- c) Provide calm restful surrounding.
- d) Minimize environmental noises.
- e) Keep the mother informed of progress.
- f) Provide psychological support and counseling.

#### **6) ASSESS FOR WORSENING OF PREGNANCY INDUCED HYPERTENSION**

- a) Record blood pressure hourly.
- b) Assess fluid retention by monitoring intake output chart.
- c) Assess for edema.
- d) Check urine for albumin daily.

- e) Observe for signs such as headache, blurred vision, diplopia, nausea, vomiting, epigastric pain, dyspnoea, cough, rales on auscultation, oliguria, blood pressure of 160\ 110 mm of Hg or greater and hyperreflexion of deep tendon reflexes.
- f) Inform physician if any abnormal signs are noted.

## **7) SEIZURE MANAGEMENT.**

### **Care during ictal phase.**

- a) Assess patency of airway.
- b) Observe for activities such as body parts involved, time of occurrence, and length of episode.
- c) Turn the mother to one side, do not restrict movement. Remove constricted clothing.
- d) Protect mother with side rails and pads.
- e) Insert airway if possible, do not force the jaw to open.
- f) Keep oxygen cylinder and suction apparatus ready by side.
- g) Keep the emergency trolley ready containing, B.P apparatus, stethoscope, oxygen mask, suction catheter, E.T tube, laryngoscope, airway, IV fluids, IV cannula, sterile gloves, emergency medications like magnesium sulphate, atropine, adrenaline, sodium bicarbonate, calcium gluconate, midazolam, lasix, deriphylline etc.
- h) Notify the physician.

### **Care during post ictal phase**

- a) Monitor blood pressure following seizure.
- b) Provide suctioning to clear the airway.

- c) Administer oxygen via face mask.
- d) Administer drugs as prescribed by physician.
- e) Monitor fetal heart rate and non stress test.
- f) Dimly lit the room, limit noise and visitors following seizure.
- g) Promote rest and sleep.

#### **8) TO ENSURE FETAL WELLBEING**

- a) Auscultate fetal heart rate.
- b) Encourage mother to maintain kick chart.
- c) Place mother in left side lying position.
- d) Monitor non stress test daily.
- e) Inform physician if any abnormality is noted.

#### **9) HEALTH EDUCATION**

- a) Educate on disease condition.
- b) Keep the couple informed about adequate rest, 2hr in afternoon and 8-10 hrs in night.
- c) Teach mother about fetal kick count.
- d) Advise for dietary modification such as high protein, moderate salt and more fluids.
- e) Educate to inform if she develops headache, blurred vision, diplopia, nausea, vomiting, epigastric pain, dyspnoea, cough, scanty urine and sluggish\ loss of fetal movements.

### **III. INITIAL INVESTIGATIONS**

Complete blood count :

Liver function test :

Renal function test :

Cardiotocography :

Ultrasonography :

## **SAMPLE -1**

The mother is 39 years old multigravida with 34 weeks of gestation. She is working as a teacher. She had previous history of pregnancy induced hypertension in first pregnancy which resulted in intra uterine death.

### **INITIAL ASSESSMENT**

Initial assessment was done on 1st day of nursing care. Head to foot assessment was done including obstetrical assessment. The mother was conscious and oriented to time, place and person. She was obese. The vital signs were; temperature- 98.2 F, pulse- 88/ mt, respiration- 22/mt, blood pressure-170/100 mm of Hg.

The mother did not have any diplopia, blurred vision, abnormal deep tendon reflexes, epigastric pain, nausea, vomiting, cough or abnormal breath sounds. The mother had bilateral pedal edema of score 3+. Obstetric assessment revealed a single live intra uterine fetus, appropriate for gestational age. Fetal heart rate was 142 bts/mt, non stress test revealed reactive pattern and ultrasonography report revealed single live intrauterine gestation of 33-34 weeks gestation.

### **ONGOING ASSESSMENT**

#### **Assessment of maternal wellbeing**

Vital signs were monitored hourly and were not under control through out the days. On the 7<sup>th</sup> day of nursing care severe blood pressure fluctuation was noted. The blood pressure readings ranged between 140/100 mm of Hg and 200/110 mm of Hg. Temperature, pulse and respiration remained within normal limits.

Mother was weighed daily and no abnormal weight gain was noted. Urine was tested for the presence of albumin on a daily basis. Albumin was absent in urine till 4<sup>th</sup>

day of nursing care, thereafter trace amounts of albumin was noted in urine and the score was 1+.

Edema assessment was done daily. Bilateral pedal edema was noted and the score on 1st day was 3+ which reduced to 2+ on 5<sup>th</sup> day of nursing care. Fluid intake and output was monitored daily. Normal fluid intake and output were noted.

Neurological assessment was done daily to assess any signs of neurological complications. Deep tendon reflexes were assessed 4<sup>th</sup> hourly. The score was +2 throughout the days which were normal. Mother did not develop any diplopia, blurred vision, altered consciousness or seizures. Headache was reported on 7<sup>th</sup> day of nursing care when she had elevated blood pressure of 170/100 mm of Hg.

The mother was assessed daily for any signs of pulmonary complications such as cough, dyspnoea or rales on auscultation. No pulmonary symptoms were noted throughout the days.

Hepatic assessment was done daily to assess any signs of hepatic involvement like epigastric pain, nausea and vomiting. No such symptoms were noted throughout the days.

### **Assessment of fetal wellbeing**

Fetal wellbeing was assessed daily. Non stress test was done every 8<sup>th</sup> hourly which revealed a reactive pattern. Daily fetal kick count monitoring was taught to the mother and the counts were calculated for 12 hours. Fetal kick counts remained >3 / hr. Fetal heart rate was monitored hourly which was regular and stable.

## MATERNAL WELL BEING

PARAMETERS	MATERNAL WELL BEING						
DAYS	1	2	3	4	5	6	7
Vital signs							
Blood pressure (mm of Hg)	160/90	160/90	160/90	140/90	150/90	160/90	170/110
Temperature (°F)	98	98.2	98.2	98.2	98.6	98.8	98.6
Pulse (beats/mt)	84	88	86	82	82	78	82
Respiration (breaths/mt)	22	22	22	22	22	22	22
Weight (kg)	78	78	78	78	78	78	78
Urine-albumin	NIL	NIL	NIL	1+	1+	1+	1+
Edema assessment	3+	3+	3+	3+	2+	2+	2+
Fluid intake and output (ml)	2250/2375	2050/2125	2250/2275	1975/2015	2250/2375	1900/1950	1950/2025
Deep tendon reflexes	+2	+2	+2	+2	+2	+2	+2

## FETAL WELL BEING

[illegible]



## **NURSING INTERVENTIONS TO MOTHER WITH PREGNANCY INDUCED HYPERTENSION**

After assessment of mother nursing care was rendered according to needs and problems. The basic physiologic needs were identified and met.

Rest and sleep was encouraged. 1-2 hours of sleep during daytime and 8-10 hours of sleep during night was maintained. Bed rest was advised in left lateral position. Calm and quiet environment was provided and visitors were restricted to minimum.

High protein, moderate salt and iron rich diet was advised. Protein rich diet like pulses, cereals, egg, milk, fish and chicken was encouraged. Moderate salt consumption of 4g/ day was advised. Also advised to avoid high salt containing foods like, pickles, papads, chips and junk food. Iron rich sources like, green leafy vegetables, raggi, drumstick, dates, jaggery etc was encouraged.

Blood pressure was monitored hourly. It was not under control throughout the days. On 7<sup>th</sup> day of nursing care severe blood pressure fluctuations were noted which ranged between 140/100 mm of Hg and 200/110 mm of Hg. Anti hypertensive drugs were administered as per order of the obstetrician. Temperature, pulse and respiration was normal through out the days of nursing care.

Edema was assessed daily. Initial pitting edema score was 3+. Limbs were elevated over pillows. Moderate salt consumption was advised to reduce fluid retention. Strict bed rest was advised.

Urine was tested for the presence of albumin. Traces of albumin were noted in urine on 4<sup>th</sup> day of nursing care and the score was 1+. Protein rich diet was advised for the mother. Fluid intake and output chart was maintained to identify fluid volume imbalance. The mother was weighed daily and no abnormal weight gain was noted.

Neurological assessment was done daily to assess early signs of complications. Headache was reported on 7<sup>th</sup> day of nursing care when she had blood pressure of 170/100 mm of Hg. T.Calcigard 10 mg was administered, stat dose and blood pressure was reduced to 120/70 mm of Hg after 15 minutes and headache was resolved. Deep tendon reflex score was +2 throughout the days which was normal. No other abnormal signs were noted.

Pulmonary and hepatic assessment revealed that mother did not develop any pulmonary or hepatic complications.

Psychological support was given to reduce her anxiety. Deep breathing exercises were taught and diversional therapy like reading books, listening music and praying was encouraged. The mother had undergone training in yoga and meditation. She was encouraged to practice the same in the hospital to reduce stress. The mother was encouraged to ventilate her feelings and concerns.

Fetal wellbeing was also assessed by non stress test, fetal heart rate and fetal movement count. Non stress test revealed a reactive pattern and kick counts were >3/hr throughout the days. Fetal heart rate was monitored hourly and it was regular and stable.

## **REASSESSMENT AFTER NURSING INTERVENTIONS**

The mother had severe blood pressure fluctuation on 7<sup>th</sup> day of nursing care and was taken up for emergency caesarean section. She delivered a healthy male baby and in view of preterm delivery baby was kept in neonatal intensive care unit. Mother was stable and did not develop any neurological, pulmonary or hepatic complications.

## **SAMPLE- 2**

The mother is 29 years old primigravida with 37 weeks of gestation. She is a housewife. She was diagnosed as pregnancy induced hypertension at 36<sup>th</sup> week of gestation.

### **INITIAL ASSESSMENT**

Initial assessment was done on 1st day of nursing care. Head to foot assessment was done including obstetrical assessment. The mother was conscious and oriented to time, place and person. She was obese. The vital signs were; temperature- 98 F, pulse- 84/ mt, respiration- 20/mt, blood pressure-130/80 mm of Hg.

The mother did not have any diplopia, blurred vision, abnormal deep tendon reflexes, epigastric pain, nausea, vomiting, cough or abnormal breath sounds. The mother had bilateral pedal edema of score 2+. Obstetric assessment revealed a single live intra uterine fetus, appropriate for gestational age. Fetal heart rate was 148 bts/mt, non stress test revealed reactive pattern and ultrasonography report revealed single live intrauterine gestation of 36-38 weeks gestation.

### **ONGOING ASSESSMENT**

#### **Assessment of maternal wellbeing**

Vital signs were monitored hourly and were within normal limits through out the days.

Mother was weighed daily and no abnormal weight gain was noted. Urine was tested for the presence of albumin on a daily basis. Albumin was absent in urine

Edema assessment was done daily. Bilateral pedal edema was noted and the score on 1st day was 2+ which reduced to 1+ on 2<sup>nd</sup> day of nursing care. Fluid intake and output was monitored daily. Normal fluid intake and output were noted.

Neurological assessment was done daily to assess any signs of neurological complications. Deep tendon reflexes were assessed 4<sup>th</sup> hourly. The score was +2 throughout the days which were normal. Mother did not develop any diplopia, blurred vision, altered consciousness or seizures.

The mother was assessed daily for any signs of pulmonary complications such as cough, dyspnoea or rales on auscultation. No pulmonary symptoms were noted throughout the days.

Hepatic assessment was done daily to assess any signs of hepatic involvement like epigastric pain, nausea and vomiting. No such symptoms were noted throughout the days.

### **Assessment of fetal wellbeing**

Fetal wellbeing was assessed daily. Non stress test was done every 8<sup>th</sup> hourly which revealed a reactive pattern. Daily fetal kick count monitoring was taught to the mother and the counts were calculated for 12 hours. Fetal kick counts remained >3 / hr. Fetal heart rate was monitored hourly which was regular and stable.

## MATERNAL WELL BEING

PARAMETERS	MATERNAL WELL BEING						
DAYS	1	2	3	4	5	6	7
• Vital signs							
Blood pressure (mm of Hg)	120/80	120/80	110/80	110/80	110/80		
Temperature (°F)	98.8	98.6	98.6	98.6	98.6		
Pulse (beats/mt)	88	82	88	84	82		
Respiration (breaths/mt)	22	20	20	22	22		
• Weight (kg)	84	84	84	84	84		
• Urine-albumin	NIL	NIL	NIL	NIL	NIL		
• Edema assessment	2+	1+	1+	1+	1+		
• Fluid intake and output (ml)	2500/5000	2050/2350	2150/2275	3050/3575	2350/2420		
• Deep tendon reflexes	+2	+2	+2	+2	+2		

### FETAL WELL BEING

PARAMETERS	FETAL WELL BEING						
DAYS	1	2	3	4	5	6	7
Fetal heart rate (beats/min)	142	140	140	140	142		
Kick count for 12 hours	16	20	16	20	24		
Non stress test	reactive	reactive	reactive	reactive	reactive		

## **NURSING INTERVENTIONS TO MOTHER WITH PREGNANCY INDUCED HYPERTENSION**

After assessment of mother nursing care was rendered according to needs and problems. The basic physiologic needs were identified and met.

Rest and sleep was encouraged. 1-2 hours of sleep during daytime and 8-10 hours of sleep during night was maintained. Bed rest was advised in left lateral position. Calm and quiet environment was provided and visitors were restricted to minimum.

High protein, moderate salt and iron rich diet was advised. Protein rich diet like pulses, cereals, egg, milk, fish and chicken was encouraged. Moderate salt consumption of 4g/ day was advised. Also advised to avoid high salt containing foods like, pickles, papads, chips and junk food. Iron rich sources like, green leafy vegetables, raggi, drumstick, dates, jaggery etc was encouraged.

Blood pressure was monitored hourly. It was under control throughout the days. Temperature, pulse and respiration was normal through out the days of nursing care.

Edema was assessed daily. Initial pitting edema score was 2+. Limbs were elevated over pillows. Moderate salt consumption was advised to reduce fluid retention. Strict bed rest was advised.

Urine was tested for the presence of albumin. Albumin was absent in urine.. Protein rich diet was advised for the mother. Fluid intake and output chart was maintained to identify fluid volume imbalance. The mother was weighed daily and no abnormal weight gain was noted.



Neurological assessment was done daily to assess early signs of neurological complications. Deep tendon reflex score was +2 throughout the days which was normal. No abnormal signs of neurological involvement were noted.

Pulmonary and hepatic assessment revealed that mother did not develop any pulmonary or hepatic complications.

Psychological support was given to reduce her anxiety. Deep breathing exercises were taught and diversional therapy like reading books, listening music and praying was encouraged. The mother was encouraged to ventilate her feelings and concerns.

Fetal wellbeing was also assessed by non stress test, fetal heart rate and fetal movement count. Non stress test revealed a reactive pattern and kick counts were >3/hr throughout the days. Fetal heart rate was monitored hourly and it was regular and stable.

## **REASSESSMENT AFTER NURSING INTERVENTIONS**

Blood pressure was under control through out the days. The mother was term and was taken up for caesarean section due to cephalo pelvic disproportion. She delivered a healthy male baby and the baby was active and healthy. Mother was stable and did not develop any signs of neurological, pulmonary or hepatic complications.

### **SAMPLE-3**

The mother is 25 years old multigravida with 35 weeks of gestation. She is a housewife. She had previous history of pregnancy induced hypertension which resulted in intra uterine death.

#### **INITIAL ASSESSMENT**

Initial assessment was done on 1st day of nursing care. Head to foot assessment was done including obstetrical assessment. The mother was conscious and oriented to time, place and person. She was moderately built. The vital signs were; temperature- 98.2 F, pulse- 88/ mt, respiration- 22/mt, blood pressure-110/80 mm of Hg.

The mother did not have any diplopia, blurred vision, abnormal deep tendon reflexes, epigastric pain, nausea, vomiting, cough or abnormal breath sounds. Edema was absent for the mother. Obstetric assessment revealed a single live intra uterine fetus, appropriate for gestational age. Fetal heart rate was 148 bts/mt, non stress test revealed reactive pattern and ultrasonography report revealed single live intrauterine gestation of 35-36 weeks gestation.

#### **ONGOING ASSESSMENT**

##### **Assessment of maternal wellbeing**

Vital signs were monitored hourly and were within normal limits through out the days.

Mother was weighed daily and no abnormal weight gain was noted. Urine was tested for the presence of albumin on a daily basis. Albumin was absent in urine

Edema assessment was done daily. Mother did not develop edema. Fluid intake and output was monitored daily. Normal fluid intake and output were noted.

Neurological assessment was done daily to assess any signs of neurological complications. Deep tendon reflexes were assessed 4<sup>th</sup> hourly. The score was +2 throughout the days which were normal. Mother did not develop any diplopia, blurred vision, headache, altered consciousness or seizures.

The mother was assessed daily for any signs of pulmonary complications such as cough, dyspnoea or rales on auscultation. No pulmonary symptoms were noted throughout the days.

Hepatic assessment was done daily to assess any signs of hepatic involvement like epigastric pain, nausea and vomiting. No such symptoms were noted throughout the days.

### **Assessment of fetal wellbeing**

Fetal wellbeing was assessed daily. Non stress test was done every 8<sup>th</sup> hourly which revealed a reactive pattern. Daily fetal kick count monitoring was taught to the mother and the counts were calculated for 12 hours. Fetal kick counts remained >3 / hr. Fetal heart rate was monitored hourly which was regular and stable.

## MATERNAL WELL BEING

PARAMETERS	MATERNAL WELL BEING						
DAYS	1	2	3	4	5	6	7
<ul style="list-style-type: none"> <li>Vital signs</li> </ul>							
Blood pressure (mm of Hg)	110/80	110/80	110/80	110/80			
Temperature (°F)	98.4	98	98.2	98			
Pulse (beats/mt)	84	86	86	84			
Respiration (breaths/mt)	22	22	22	22			
• Weight (kg)	62	62	62	62			
• Urine-albumin	NIL	NIL	NIL	NIL			
• Edema assessment	NIL	NIL	NIL	NIL			
• Fluid intake and output (ml)	1875/2250	1900/2075	2000/2080	2050/2150			
• Deep tendon reflexes	+2	+2	+2	+2			

### FETAL WELL BEING

PARAMETERS	FETAL WELL BEING						
DAYS	1	2	3	4	5	6	7
Fetal heart rate (beats/min)	146	144	148	144			
Kick count for 12 hours	20	20	16	20			
Non stress test	reactive	reactive	reactive	reactive			

## **NURSING INTERVENTIONS TO MOTHER WITH PREGNANCY INDUCED HYPERTENSION**

After assessment of mother nursing care was rendered according to needs and problems. The basic physiologic needs were identified and met.

Rest and sleep was encouraged. 1-2 hours of sleep during daytime and 8-10 hours of sleep during night was maintained. Bed rest was advised in left lateral position. Calm and quiet environment was provided and visitors were restricted to minimum.

High protein, moderate salt and iron rich diet was advised. Protein rich diet like pulses, cereals, egg, milk, fish and chicken was encouraged. Moderate salt consumption of 4g/ day was advised. Also advised to avoid high salt containing foods like, pickles, papads, chips and junk food. Iron rich sources like, green leafy vegetables, raggi, drumstick, dates, jaggery etc was encouraged.

Blood pressure was monitored hourly. It was under control throughout the days. Temperature, pulse and respiration were normal through out the days of nursing care.

Edema was assessed daily. Mother did not develop edema. Moderate salt consumption was advised to reduce fluid retention. Strict bed rest was advised.

Urine was tested for the presence of albumin. Albumin was absent in urine. Fluid intake and output chart was maintained to identify fluid volume imbalance. Fluid intake and output remained normal. The mother was weighed daily and no abnormal weight gain was noted.

Neurological assessment was done daily to assess early signs of neurological complications. Deep tendon reflex score was +2 throughout the days which were normal. No abnormal signs of neurological involvement were noted.

Pulmonary and hepatic assessment revealed that mother did not develop any pulmonary or hepatic complications.

Psychological support was given to reduce her anxiety. Deep breathing exercises were taught and diversional therapy like reading books, listening music and praying was encouraged. The mother was encouraged to ventilate her feelings and concerns.

Fetal wellbeing was also assessed by non stress test, fetal heart rate and fetal movement count. Non stress test revealed a reactive pattern and kick counts were >3/hr throughout the days. Fetal heart rate was monitored hourly and it was regular and stable.

## **REASSESSMENT AFTER NURSING INTERVENTIONS**

Blood pressure was under control through out the days. Fetal health was satisfactory. Mother was stable and did not develop any signs of neurological, pulmonary or hepatic complications. After ensuring maternal and fetal wellbeing mother was discharged on 4<sup>th</sup> day of nursing care.

#### **SAMPLE-4**

The mother is 33 years old primigravida with 35 weeks of gestation. She is a housewife. She was diagnosed as pregnancy induced hypertension at 33 weeks of gestation.

#### **INITIAL ASSESSMENT**

Initial assessment was done on 1st day of nursing care. Head to foot assessment was done including obstetrical assessment. The mother was conscious and oriented to time, place and person. She was obese. The vital signs were; temperature- 98.8 F, pulse- 88/ mt, respiration- 22/mt, blood pressure-120/80 mm of Hg.

The mother did not have any diplopia, blurred vision, abnormal deep tendon reflexes, epigastric pain, nausea, vomiting, cough or abnormal breath sounds. Edema was absent for the mother. Obstetric assessment revealed a single live intra uterine fetus, appropriate for gestational age. Fetal heart rate was 138 bts/mt, non stress test revealed reactive pattern and ultrasonography report revealed single live intrauterine gestation of 33-35 weeks gestation.

#### **ONGOING ASSESSMENT**

##### **Assessment of maternal wellbeing**

Vital signs were monitored hourly and were within normal limits through out the days.

Mother was weighed daily and no abnormal weight gain was noted. Urine was tested for the presence of albumin on a daily basis. Albumin was absent in urine.

Edema assessment was done daily. Mother did not develop edema. Fluid intake and output was monitored daily. Normal fluid intake and output were noted.



Neurological assessment was done daily to assess any signs of neurological complications. Deep tendon reflexes were assessed 4<sup>th</sup> hourly. The score was +2 through out the days which were normal. Mother did not develop any diplopia, blurred vision, headache, altered consciousness or seizures.

The mother was assessed daily for any signs of pulmonary complications such as cough, dyspnoea or rales on auscultation. No pulmonary symptoms were noted throughout the days.

Hepatic assessment was done daily to assess any signs of hepatic involvement like epigastric pain, nausea and vomiting. No such symptoms were noted through out the days.

#### **Assessment of fetal wellbeing**

Fetal wellbeing was assessed daily. Non stress test was done every 8<sup>th</sup> hourly which revealed a reactive pattern. Daily fetal kick count monitoring was taught to the mother and the counts were calculated for 12 hours. Fetal kick counts remained >3 / hr. Fetal heart rate was monitored hourly which was regular and stable.

## MATERNAL WELL BEING

PARAMETERS	MATERNAL WELL BEING						
DAYS	1	2	3	4	5	6	7
• Vital signs							
Blood pressure (mm of Hg)	120/80	110/80	110/80	110/70	110/80	110/80	
Temperature (°F)	98.2	98.2	98	98.6	98	98.6	
Pulse (beats/mt)	82	80	82	80	82	82	
Respiration (breaths/mt)	20	20	22	20	22	22	
• Weight (kg)	71	71	71	71	71	71	
• Urine-albumin	NIL	NIL	NIL	NIL	NIL	NIL	
• Edema assessment	NIL	NIL	NIL	NIL	NIL	NIL	
• Fluid intake and output (ml)	1950/2015	1875/2010	1900/2000	1980/2010	1950/2010	1850/1980	
• Deep tendon reflexes	+2	+2	+2	+2	+2	+2	

## FETAL WELL BEING

[illegible]

## **NURSING INTERVENTIONS TO MOTHER WITH PREGNANCY INDUCED HYPERTENSION**

After assessment of mother nursing care was rendered according to needs and problems. The basic physiologic needs were identified and met.

Rest and sleep was encouraged. 1-2 hours of sleep during daytime and 8-10 hours of sleep during night was maintained. Bed rest was advised in left lateral position. Calm and quiet environment was provided and visitors were restricted to minimum.

High protein, moderate salt and iron rich diet was advised. Protein rich diet like pulses, cereals, egg, milk, fish and chicken was encouraged. Moderate salt consumption of 4g/ day was advised. Also advised to avoid high salt containing foods like, pickles, papads, chips and junk food. Iron rich sources like, green leafy vegetables, raggi, drumstick, dates, jaggery etc was encouraged.

Blood pressure was monitored hourly. It was under control throughout the days. Temperature, pulse and respiration were normal through out the days of nursing care.

Edema was assessed daily. Mother did not develop edema. Moderate salt consumption was advised to reduce fluid retention. Strict bed rest was advised.

Urine was tested for the presence of albumin. Albumin was absent in urine. Fluid intake and output chart was maintained to identify fluid volume imbalance. Fluid intake and output remained normal. The mother was weighed daily and no abnormal weight gain was noted.

Neurological assessment was done daily to assess early signs of neurological complications. Deep tendon reflex score was +2 throughout the days which were normal. No abnormal signs of neurological involvement were noted.

Pulmonary and hepatic assessment revealed that mother did not develop any pulmonary or hepatic complications.

Psychological support was given to reduce her anxiety. Deep breathing exercises were taught and diversional therapy like reading books, listening music and praying was encouraged. The mother was encouraged to ventilate her feelings and concerns.

Fetal wellbeing was also assessed by non stress test, fetal heart rate and fetal movement count. Non stress test revealed a reactive pattern and kick counts were >3/hr throughout the days. Fetal heart rate was monitored hourly and it was regular and stable.

## **REASSESSMENT AFTER NURSING INTERVENTIONS**

Blood pressure was under control through out the days. Fetal health was satisfactory. After ensuring maternal and fetal wellbeing caesarean section was conducted and a healthy male baby was delivered. Mother was stable and did not develop any signs of neurological, pulmonary or hepatic complications.

## **SAMPLE- 5**

The mother is 26 years old multigravida with 29 weeks of gestation. She is a housewife. She was diagnosed as pregnancy induced hypertension at 28<sup>th</sup> week of gestation.

### **INITIAL ASSESSMENT**

Initial assessment was done on 1st day of nursing care. Head to foot assessment was done including obstetrical assessment. The mother was conscious and oriented to time, place and person. She was moderately built. The vital signs were; temperature- 98.2 F, pulse- 82/ mt, respiration- 22/mt, blood pressure-120/80 mm of Hg.

The mother did not have any diplopia, blurred vision, abnormal deep tendon reflexes, epigastric pain, nausea, vomiting, cough or abnormal breath sounds. Edema was absent for the mother. Obstetric assessment revealed a single live intra uterine fetus, appropriate for gestational age. Fetal heart rate was 148 bts/mt, non stress test revealed reactive pattern and ultrasonography report revealed single live intrauterine gestation of 29-30 weeks gestation. She was diagnosed as oligohydramnios. (AFI- 1.2cm)

### **ONGOING ASSESSMENT**

#### **Assessment of maternal wellbeing**

Vital signs were monitored hourly and were within normal limits through out the days.

Mother was weighed daily and no abnormal weight gain was noted. Urine was tested for the presence of albumin on a daily basis. Albumin was absent in urine

Edema assessment was done daily. Mother did not develop edema. Fluid intake and output was monitored daily. Normal fluid intake and output were noted.

Neurological assessment was done daily to assess any signs of neurological complications. Deep tendon reflexes were assessed 4<sup>th</sup> hourly. The score was +2 through out the days which were normal. Mother did not develop any diplopia, blurred vision, headache, altered consciousness or seizures.

The mother was assessed daily for any signs of pulmonary complications such as cough, dyspnoea or rales on auscultation. No pulmonary symptoms were noted throughout the days.

Hepatic assessment was done daily to assess any signs of hepatic involvement like epigastric pain, nausea and vomiting. No such symptoms were noted through out the days.

### **Assessment of fetal wellbeing**

Fetal wellbeing was assessed daily. Non stress test was done every 8<sup>th</sup> hourly which revealed a reactive pattern. Daily fetal kick count monitoring was taught to the mother and the counts were calculated for 12 hours. Fetal kick counts remained >3 / hr. Fetal heart rate was monitored hourly which was regular and stable.

## MATERNAL WELL BEING

PARAMETERS	MATERNAL WELL BEING						
DAYS	1	2	3	4	5	6	7
<ul style="list-style-type: none"> <li>Vital signs                             <ul style="list-style-type: none"> <li>Blood pressure (mm of Hg)</li> <li>Temperature (°F)</li> <li>Pulse (beats/mt)</li> <li>Respiration (breaths/mt)</li> </ul> </li> <li>Weight (kg)</li> <li>Urine-albumin</li> <li>Edema assessment</li> <li>Fluid intake and output (ml)</li> <li>Deep tendon reflexes</li> </ul>	120/80	120/80	130/80	130/80	130/70		
	98.2	98	98.6	98.4	98.2		
	84	86	86	84	82		
	22	22	22	22	22		
	76	76	76	76	76		
	NIL	NIL	NIL	NIL	NIL		
	NIL	NIL	NIL	NIL	NIL		
	1875/2250	1900/2075	2000/2080	2050/2150	1980/2010		
	+2	+2	+2	+2	+2		



**FETAL WELL BEING**

PARAMETERS	FETAL WELL BEING						
DAYS	1	2	3	4	5	6	7
Fetal heart rate (beats/min)	148	146	142	140	146		
Kick count for 12 hours	20	24	20	24	24		
Non stress test	reactive	reactive	reactive	reactive	reactive		

## **NURSING INTERVENTIONS TO MOTHER WITH PREGNANCY INDUCED HYPERTENSION**

After assessment of mother nursing care was rendered according to needs and problems. The basic physiologic needs were identified and met.

Rest and sleep was encouraged. 1-2 hours of sleep during daytime and 8-10 hours of sleep during night was maintained. Bed rest was advised in left lateral position. Calm and quiet environment was provided and visitors were restricted to minimum.

High protein, moderate salt and iron rich diet was advised. Protein rich diet like pulses, cereals, egg, milk, fish and chicken was encouraged. Moderate salt consumption of 4g/ day was advised. Also advised to avoid high salt containing foods like, pickles, papads, chips and junk food. Iron rich sources like, green leafy vegetables, raggi, drumstick, dates, jaggery etc was encouraged.

Blood pressure was monitored hourly. It was under control throughout the days. Temperature, pulse and respiration were normal through out the days of nursing care.

Edema was assessed daily. Mother did not develop edema. Moderate salt consumption was advised to reduce fluid retention. Strict bed rest was advised.

Urine was tested for the presence of albumin. Albumin was absent in urine. Fluid intake and output chart was maintained to identify fluid volume imbalance. Fluid intake and output remained normal. The mother was weighed daily and no abnormal weight gain was noted.

Neurological assessment was done daily to assess early signs of neurological complications. Deep tendon reflex score was +2 throughout the days which were normal. No abnormal signs of neurological involvement were noted.

Pulmonary and hepatic assessment revealed that mother did not develop any pulmonary or hepatic complications.

Psychological support was given to reduce her anxiety. Deep breathing exercises were taught and diversional therapy like reading books, listening music and praying was encouraged. The mother was encouraged to ventilate her feelings and concerns.

Fetal wellbeing was also assessed by non stress test, fetal heart rate and fetal movement count. Non stress test revealed a reactive pattern and kick counts were >3/hr throughout the days. Fetal heart rate was monitored hourly and it was regular and stable.

## **REASSESSMENT AFTER NURSING INTERVENTIONS**

Blood pressure was under control through out the days. Fetal health was satisfactory. Mother had preterm labour and emergency caesarean section was conducted. A healthy female baby was delivered and was kept in neonatal intensive care unit in view of premature baby. Mother was stable and did not develop any signs of neurological, pulmonary or hepatic complications.